UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of:	)	
	)	Docket No.: 40-9091-MLA
STRATA ENERGY, INC.	)	
	)	Date: February 21, 2012
(Ross In Situ Uranium Recovery Facility)	)	

BRIEF OF APPLICANT STRATA ENERGY, INC IN SUPPORT OF ITS APPEAL FROM LBP-12-3

I. INTRODUCTION

Strata Energy, Inc. (Strata), by its undersigned counsel of record, hereby submits this Brief in Support of Its Appeal of LBP-12-3 of the Atomic Safety and Licensing Board's (Licensing Board) decision in LBP-12-3[1] regarding Strata's license application for a new, combined source and 11e.(2) byproduct material license to construct and operate an in situ leach uranium recovery (ISR) facility (hereinafter the "proposed Ross ISR Project") in Crook County, Wyoming. For the reasons discussed below, Strata respectfully requests that the Commission reverse the Licensing Board's rulings regarding standing and deny the Natural Resources Defense Council/Powder River Basin Resource Council's (hereinafter the "Council") request for a hearing in its entirety. If the Licensing Board's standing determination in LBP-12-3 is upheld, then the Commission should reverse the Board's decision to admit Environmental Contentions 1 and 2. Further, given the complexity of the issues argued in this appeal, especially with respect to Strata's appeal of the admission of Environmental Contentions 1 and 2, and the potential

[1] *Strata Energy Inc.*, (Ross In Situ Recovery Uranium Project), LBP-12-3, Slip Op. (February 10, 2012).

industry impact of this appeal, Strata respectfully requests that the Commission grant oral argument for this appeal.

II. BACKGROUND AND PROCEDURAL HISTORY

On December 31, 2010 and January 4, 2011 respectively, Strata submitted the necessary components of a license application to NRC Staff seeking the issuance of a combined source and 11e.(2) byproduct material license to construct and operate the proposed Ross ISR Project in Crook County, Wyoming. At the time that Strata's license application was submitted, NRC Staff held a Category 1 public meeting to discuss the submission and the procedures that would follow during the NRC licensing process, including its initial "acceptance review" which typically takes up to ninety (90) days to complete. However, on January 19, 2011, NRC Staff informed Strata that its "acceptance review" would not commence until May 2, 2011 due to agency resource constraints. But, while NRC Staff's "acceptance review" of the license application and, thus, its formal docketing would be delayed, on January 26, 2011, NRC Staff made Strata's license application publicly available on its ADAMS database. Thus, Strata's license application was available for review by the Council and any other interested parties for more than three (3) months prior to the commencement of NRC Staff's "acceptance review."

NRC Staff commenced its "acceptance review" on May 2, 2011 and, on June 28, 2011, announced that the "acceptance review" had resulted in formal docketing of Strata's license application. NRC issued a Federal Register notice dated July 13, 2011, which announced the formal docketing of Strata's license application and the opportunity to request an administrative hearing within a sixty (60) day time period.[2] Based on the Federal Register notice issuance date, Strata's license application was publicly available for review by the Council and any other interested parties for more than five (5) months.

[2] *See* 76 Fed. Reg. 41308 (July 13, 2011).

On August 10, 2011, the Council submitted a Motion for Extension of Time to file its Request. On August 17, 2011, the Office of the Secretary issued an Order granting the Council's Motion without allowing Strata's or NRC Staff's counsel to submit a Response objecting to the Motion given the amount of time the license application was available for public review. On August 22, 2011, Strata filed a Motion for Reconsideration of the Office of the Secretary's decision with which NRC Staff counsel concurred. On September 13, 2011, the Office of the Secretary denied Strata's Motion without comment. On October 27, 2011, the Council filed its Request and, on December 5, 2011, Strata and NRC Staff filed their responses to the Councils' Request. The Council then filed its reply to both Strata's and NRC Staff's Responses on December 15, 2011. Based on its pleadings and supporting affidavits, it appeared that the Council was seeking representational standing based on the membership and affidavit of Ms. Pam Viviano who owns properties that are more than ten (10) miles northeast and seven (7) miles southeast of the proposed Ross ISR project site. Accordingly, the allegations in Ms. Viviano's affidavit has served as the primary focus of both Strata and NRC Staff's Responses.

On December 20, 2012, the Licensing Board conducted an oral hearing at which the Council, Strata, and NRC Staff presented their positions as embodied in their respective pleadings. After considering all pleadings and oral argument, the Licensing Board determined that the Council possesses the requisites for representational standing based on Ms. Viviano's allegations involving increased dust created by traffic associated with Strata's proposed Ross ISR project on an unimproved dirt and gravel road abutting Ms. Viviano's residence and night-time light pollution at her residence from Strata's proposed Ross ISR facilities.

III. STANDARD OF REVIEW

As a general proposition, a party other than a petitioner may appeal an order granting a request for hearing and petition to intervene "on the question as to [w]hether the request for hearing or petition to intervene should have been wholly denied." *See* 10 CFR § 2.311(a) & (d)(1). As stated in *In the Matter of Southern Nuclear Operating Co.*, the Commission stated:

> "In the absence of clear error or an abuse of discretion, we defer to our boards' rulings on such threshold issues. We will not sustain an appeal that fails to show a board committed *clear error or abuse of discretion*."

CLI-11-08, 2011 WL 4502973 (September 27, 2011), *citing AmerGen Energy Co. LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006) (emphasis added).

A. Standing

In order for a party to successfully intervene in an NRC administrative hearing, it must be demonstrated that he or she has the requisite standing for such intervention. *See* 10 CFR § 2.309(a). To establish standing, there must be an "injury-in-fact" that is either actual or threatened and that must be "concrete and particularlized," not "conjectural" or "hypothetical." *Sequoyah Fuels Corp. & General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994). As a result, standing should be denied when the threat of injury is too speculative. *See id.* To show the required injury-in-fact based on an assertion of future harm, NRC has held that future harm "must be threatened, certainly impending, and real and immediate." *Babcock & Wilcox*, 1993 NRC LEXIS 6, *7-8 (1993).

A petitioner also must establish a causal nexus between the alleged injury and the challenged action. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 & 2), LBP-98-27, 48 NRC 271, 276 (1998), *aff'd*, CLI-99-4, 49 NRC 185 (1999). Determination of a "causal nexus" under this standard depends, in part, on whether the chain of causation is "plausible" (*Sequoyah Fuels*, CLI-94-12, 40 NRC at 75), as judicial and Commission standing

jurisprudence requires "realistic threat…of direct injury." *Int'l Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 254 (2001). Absent an obvious potential for harm, "it becomes [petitioner's] burden to provide a 'specific and plausible' explanation of how the action will affect her." *See Nuclear Fuel Servs., Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004) (finding no obvious potential for harm at petitioner's property 20 miles from the site of a facility that converted high-enriched uranium to low-enriched uranium).

B. Admissibility of Contentions

In addition to providing a demonstration of the requisites for standing under 10 CFR § 2.309(a), a petitioner also must proffer at least one admissible contention. *See* 10 CFR § 2.309(f)(1). The application of these six contention admissibility factors is "strict by design." as stated by the Commission, "[i]f any one of these [six] requirements is not met, a contention must be rejected." *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)*; see also Dominion Nuclear Conn., Inc.,* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001).

As stated in 10 C.F.R. § 2.309(f)(1)(iii), admissible contentions must be within the scope of the proceeding as defined by the Federal Register notice offering an opportunity for a hearing. *See Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-00-23, 52 NRC 327, 329 (2000). Pursuant to 10 C.F.R. § 2.309(f)(1)(vi), an admissible contention must present a genuine dispute with the applicant on a material issue of law or fact, and any contention failing to satisfy this requirement can be dismissed. *See Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-248 (1993), *review declined* , CLI-94-2, 39 NRC 91 (1994). Failure to support a contention with adequate factual information and expert opinions requires that the contention be rejected. *See Palo Verde*, 34

NRC at 155. Thus, the expert testimony offered by the Council must address "with specificity" the potential adverse impacts on the member(s) (i.e., Ms. Pam Viviano) that the Council represents.

Mere speculation and bare assertions alleging that a matter should be considered will not suffice to allow the admission of a proffered contention. *See Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). The Licensing Board is not required to make assumptions of fact that favor Petitioners when they fail to provide the required support for their contentions. *See Georgia Tech,* (Georgia Tech Research Reactor), LBP-95-6, 41 NRC 281, 305 (April 26, 1995). In addition, information offered by the Council to support a contention requires an explanation of its significance in order to be sufficient to admit such contention. *Fansteel,* CLI-03-13, 58 NRC at 204.

IV. ARGUMENT

For the reasons discussed below, Strata respectfully requests that the Commission reverse the Licensing Board's grant of standing to the Council based on alleged increased dust from Strata-related traffic on an unimproved road abutting Ms. Viviano's residence and from alleged night-time light pollution from Strata's proposed ISR facilities. The Licensing Board's decision on standing represents a "clear error" and an "abuse of discretion." *In the Matter of Southern Nuclear Operating Co.*, CLI-11-08, 2011 WL 4502973 (September 27, 2011), *AmerGen Energy Co. LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006). In the event that it reverses the grant of standing, Strata respectfully requests that the Commission deny the Council's request for a hearing in its entirety based on the lack of standing.

In the event that it does not reverse the Licensing Board's grant of standing, Strata respectfully requests that the Commission reverse the Licensing Board's admission of Environmental Contentions 1 and 2.

A. Standing

1. The Licensing Board's Determination that the Council Has Standing Based on Alleged Increased Dust from Alleged Strata-Related Traffic Should Be Reversed

In LBP-12-3 below, the Licensing Board determined that the Council's sole affiant, Ms. Pam Viviano, demonstrated the requisite standing by alleging that Strata's proposed Ross ISR project will result in increased traffic that will lead to increased dust causing a potential health impact to her. The Licensing Board's decision granting standing merely states that:

> "the road that eventually goes past Ms. Viviano's residence before heading to the southeast…toward the town of Hulett…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."

LBP-12-3, slip op. at 21 (2012) (emphasis added).

Further, the Licensing Board supports its conclusion by referencing Ms. Viviano's "unrebutted averment" that "'any traffic results in a dust problem on the road abutting her property.'" *Id.*

The Commission should reverse this unsubstantiated, conjectural, and speculative finding as a "clear error" and an "abuse of discretion." First, the Licensing Board errs because it speculates that it cannot rule out the possibility that Strata's proposed Ross ISR project will result in *some* increased traffic along the road abutting Ms. Viviano's residence. This speculation/conjecture is erroneous because, with respect to the factual record as cited in LBP-12-3, the Licensing Board acknowledges that "we [the Board] recognize that…the ER makes no mention of any traffic increase to the northeast via the dirt New Haven Road…." LBP-12-3 slip op. at 21. Neither Ms. Viviano nor the Licensing Board provides *any* rationale for why Strata

project-related vehicles would travel on unimproved roads to go by her residence.[3] Indeed, in its footnote 23 on the same page, the Licensing Board refers to Strata's ER stating that the road running past Ms. Viviano's residence is not a route where increased traffic from the proposed Ross ISR project is anticipated; but rather, as noted in Strata's ER, the primary traffic route to and from the project is north-to-south on the "D" road (CR 68) to Interstate 90. *Id.* at 21, fn 23; *see also* Strata ER at 3-26.

As stated above, there must be a "causal nexus" which requires a "plausible pathway" between the proposed activity and the alleged injury-in-fact to satisfy NRC's standing requirements at Part 2.309(a). Given that the Licensing Board expressly acknowledges that Strata's license application makes no mention of increased traffic on the road past Ms. Viviano's residence and, indeed, recognizes that such license application expressly does not include such route in its analysis, the Commission should reverse this finding based on a lack of any "causal nexus," because there is no factual basis for a "plausible pathway" from Strata-based traffic to create increased dust at Ms. Viviano's residence.

Second, the Council's pleadings and Ms. Viviano's affidavit offer no support for the claim that "any dust" results in a potential health hazard, and the Licensing Board should not have relied on it without supporting expert analyses addressing the precise nature and potential significance of any health hazard from dust from an unimproved dirt road in this part of Wyoming where most roads off of main highways are "unimproved" dirt roads. The failure to do so results in a "clear error" for failure to offer facts sufficient to demonstrate a concrete, distinct, and palpable injury-in-fact.

[3] The Licensing Board's statement that it cannot say that it is "implausible" that Strata's facility will generate "some" increased traffic at Ms. Viviano's residence, does not elaborate on, much less provide facts, demonstrating what constitutes "some" traffic that likely will generate a potential threat to health from dust from a dirt road; is it one, two or three vehicles per day, per week or per month?

Neither the Council's pleadings nor its supporting affidavits offer *any* evidence to support the vague allegation that "any dust" necessarily results in a potential, but *unidentified* health hazard. Indeed, the Council offers no discussion of any potential *identified* health hazard allegedly associated with increases in dust from the increased traffic Ms. Viviano "may" experience, and no allegations of how much dust actually will reach Ms. Viviano's person and how such dust upon reading her person will cause alleged harm (e.g., inhalation, skin exposure, food chain, etc.). Thus, the administrative record is devoid of *any* allegation or information providing any detail as to the concrete and particularized nature of the alleged harm other than an amorphous statement that "any dust" results in a potential health impact. Without more, the Commission should reverse this finding as a failure to allege a concrete, distinct, palpable injury-in-fact because, as the Licensing Board notes elsewhere in LBP-12-3, there must be "some objective fundament rather than [the claim] being based solely on the petitioner's perception." *See* LBP-12-3, slip op. at 16. Thus, the Licensing Board's conclusion that the Council has standing based on an unidentified potential health hazard from dust generated by "some" increased traffic fails to identify a concrete, palpable distinct injury-in-fact and fails to establish the "plausibility" requirement for standing by relying on vague assumptions that have no factual basis in the administrative record to establish a "causal nexus."

2. The Licensing Board's Determination that the Council Has Standing Based on Alleged Night-Time Light Pollution From Strata's Ross Facilities Should Be Reversed

In LBP-12-3, the Licensing Board also found the requisites for standing in the Council's allegations that Strata's proposed Ross ISR project will generate night-time light pollution from Strata's Ross facilities that *could* result in a potential adverse visual impact to Ms. Viviano. The Licensing Board's determination is based on its conclusion that "Joint Petitioners' failure to

challenge the applicant's showing that the Ross facility is not visible from Ms. Viviano's property is [not] a fatal deficiency relative to her standing." LBP-12-3 slip op. at 23. In so finding, the Board concludes that night-time light pollution can still be viewed from Ms. Viviano's residence despite her residence being 200 feet below her western topographical horizon and more than ten (10) miles from the proposed Ross ISR facilities, which also are 380 feet below that same topographical horizon.[4] *Id.* The Licensing Board justifies this conclusion with the bizarre statement that "anyone knows who has ever seen a *search light* sweeping the night sky." *Id*.

The Licensing Board's grant of standing should be reversed for "clear error" and an "abuse of discretion" for two (2) reasons. First, the Licensing Board erred in granting standing because Ms. Viviano's affidavit offers nothing more than conjectural/speculative statements regarding potential impacts from night-time light pollution. The Council's sole allegation regarding light pollution is Ms. Viviano's statement that the proposed Ross ISR project lights *could* interfere with "clear views of the night skies that we now enjoy" at her residence. *Id.* at 22. But, this allegation offers no "objective fundament rather than being based solely on the petitioner's…perception…." *See* LBP-12-3 at 16. For example, there is nothing in Strata's ER or the administrative record suggesting that the project will employ "search lights" sweeping the sky. Indeed, the purpose of night-time lighting at industrial facilities is worker safety and facility security, which focuses lighting downward and not upward.

Further, Ms. Viviano provides no discussion of light sources at her residence, including any lighting in ancillary buildings or structures on her property that could cause light pollution impacts nor any discussion of whether there are any other facilities with lighting between her residence and the proposed Strata facilities, much less any discussion of the significant light

[4] *See* Strata Oral Argument Exhibit C (ML11350A214) (December 16, 2011).

sources created by residences and commercial/industrial facilities in the city of Hulett three (3) miles closer to her residence than the Strata project site and which obviously is a larger light source than a small, single industrial facility. Thus, there is no evidence other than a weak, conclusory statement by Ms. Viviano suggesting that the proposed Strata CPP *could* cause significant night-time light pollution at her residence.

Second, the Licensing Board erred in granting standing based on light pollution in that the Council's claims through Ms. Viviano do not meet the Commission's requirements for plausibility. The administrative record shows that Ms. Viviano's residence is more than 10 miles away from the Ross facility but, more importantly, is approximately 200 feet below the topographical horizon to the west of her residence towards the proposed Strata ISR project site, which is itself another 380 feet below that horizon. Based on this distance and these significant topographical features, assuming no search lights, the proposed Ross ISR project site would be required to have structures that are over three hundred (300) feet tall to project direct light that Ms. Viviano could even see.[5] Moreover, even if she could see some residual light, common sense suggests that it would be low in the sky close onto the topographical horizon, thus providing little potential for adverse impacts on Ms. Viviano's "clear views of the night skies" in Wyoming where the sky literally goes from horizon to horizon.

This lack of "plausibility" is compounded by the Licensing Board's apparent suggestion that the Ross facility lights would be akin to "search lights" which lights are completely different from typical industrial facility lights and nowhere in the administrative record, including Strata's license application and the Licensing Board's oral argument transcript, does Strata ever propose the use of search lights. Again, it defies logic that the proposed Ross ISR facilities could cause

[5] Physical characteristics of the primary light source is provided in Strata's ER, page 4-107 and Technical Report (TR), page 7-29.

significant, potential adverse impact to Ms. Viviano's view of the "night skies" when light sources generated by the city of Hulett that is three miles closer to her residence and orders of magnitude larger than the light source from Strata's proposed facilities apparently do not. Indeed, the illogical nature of the Licensing Board's finding is evidenced by its statements that it has "no particulars" about light emissions from the proposed Ross ISR facilities meaning that its finding was based solely on Ms. Viviano's ambiguous claim that lights from such facilities "could" affect her view of "night skies." Based on the above, the administrative record lacks any plausible factual allegations, relevant scientific or technical support or allegations that are anything more than unsupported, conjectural or conclusory statements. Without more, the Licensing Board's grant of standing based on light pollution should be reversed as failing to satisfy NRC requirements for concrete and particularized injury-in-fact and for plausible pathways to injury-in-fact as judicial and Commission standing jurisprudence requires a "realistic threat…of direct injury." *Int'l Uranium (USA) Corp.,* CLI-01-21, 54 NRC at 254.

B. Admissibility of Contentions

As will be shown below, the Licensing Board determined that the Council proffered five admissible contentions: Contention 1 (failure to properly characterize groundwater baseline); Contention 2 (failure to assess potential impacts associated with failing to restore groundwater to primary or secondary standards); Contention 3 (potential for ISR fluid migration); Contention 4A (cumulative impacts); and Contention 5A (cumulative impacts). By this appeal, Strata respectfully requests that the Commission reverse the admission of Contentions 1 and 2 and does not seek review of the remaining contentions.

1. Environmental Contention 1 is Inadmissible As It Represents a Collateral Attack on NRC Regulations and Formally Approved Commission Guidance

In LBP-12-3, the Licensing Board determined that the Council proffered an admissible contention by alleging that Strata's license application fails to include an "adequate description of the present baseline (i.e., original or pre- [sic]mining) groundwater quality…." LBP-12-3 slip op. at 28 *citing* Council Brief at 10-15. The Licensing Board's admission of this contention essentially is based on another Board's previous decision in *Dewey-Burdock*[6] where it admitted a similar contention despite the protestations of the license applicant and NRC Staff, "particularly the applicant's assertion that 10 CFR § 40.32(e) prohibited the applicant from gathering complete information on baseline water quality" cited as necessary by the Council. LBP-12-3 at 28-29, *citing Dewey-Burdock*, LBP-10-16, 72 NRC __, slip op. at 63-64). Strata contends that the Licensing Board erred in both *Dewey-Burdock* and in LBP-12-3 and that the Commission should reverse the Board's admission of Environmental Contention 1 as a collateral attack on Commission regulations and its formally approved guidance.

Initially, the *Dewey-Burdock* Board and the Licensing Board in LBP-12-3 fundamentally mischaracterize the applicability of 10 CFR § 40.32(e) and the Commission-approved ISR guidance in NUREG-1569 entitled *Standard Review Plan for In Situ Leach Uranium Extraction License Applications*[7] the latter of which, among other things, provides NRC ISR license and license amendment applicants with guidance regarding the information necessary for NRC Staff to consider and understand "baseline" groundwater conditions at a potential ISR site both pre and post-NRC license issuance.[8] As a preliminary matter, the Board attempts to interpret Part

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[6] *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC __, (Slip Op.) (August 5, 2010).
[7] NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications* (June, 2003).
[8] For more information on this, *please see* NUREG-1569, Chapters 2 (pre-license) versus 5 (post-license).

40.32(e)'s applicability to ISR license applications and post-license issuance operations using a "response to comment" from the recent Part 40.32(e) rulemaking.[9] The Licensing Board's interpretation of Part 40.32(e) appears to rest on the difference between "installation of monitoring wells that are only intended to be used to collect background data or perform background aquifer testing" and "monitoring wells that are part of an ISR wellfield monitoring network." *See* LBP-12-3, slip op. at 31. The Licensing Board's interpretation reflects a lack of understanding of the ISR process and the difference between monitoring wells used to develop "preliminary baseline" outside of proposed recovery zones per NUREG-1569, Chapter 2[10] and an entire monitoring well network system that is part of a complete wellfield package for licensed operations per Chapter 5.[11] This interpretation totally ignores Strata's multiple statements during the December 20, 2012, oral argument urging the Board to carefully review NUREG-1569, Chapters 2 and 5 to be able to understand the information on groundwater "baseline" that ISR license applicants are to provide to NRC Staff pre versus post-license issuance, the manner in which ISR licenses are evaluated and issued by NRC Staff, and how licensed ISR operations are initiated and conducted from construction through operations and site reclamation, including specifically groundwater restoration.[12] Based on the Licensing

[9] It is worth noting that Strata license application was filed prior to the finalization of the Part 40.32(e) rulemaking, including the Licensing Board's cited "response to comment." However, Strata asserts that the rulemaking did not change the premises upon which Powertech in *Dewey-Burdock* or Strata in the instant case base their arguments.

[10] Per NUREG-1569, Page 2-2: "If detailed information on actual wellfield design is not available at the time of the initial facility application, the maps show the expected wellfield locations with an indication that this information is preliminary."

[11] Per NUREG-1569, page Xviii: "Beginning construction of process facilities, wellfields, or other substantial actions that would adversely affect the environment of the site, before the staff has concluded that the appropriate action is to issue the proposed license, is grounds for denial of the application [10 CFR 40.32(e)]."

[12] It is worth noting that the Licensing Board in *Dewey-Burdock* similarly ignored the applicant's multiple efforts (at least ten (10) times) urging the Board to carefully review and consider the two different "baselines" created pursuant to NUREG-1569, Chapters 2 and 5. The Board's decision in that

Board's opinion in LBP-12-3 and the *Dewey-Burdock* court's similar interpretation, the fact that, effectively, there are two (2) "baselines" (a "pre-license baseline" and a post-license "regulatory baseline") in the context of ISR licensing plainly is misunderstood.

In the context of 10 CFR Part 40, Appendix A, Criterion 5(B)(5) and NUREG-1569, Chapter 5, "baseline" is the range of values of site-specific constituents upon which excursion detection criteria (i.e., upper control limits (UCL)) and restoration target values (RTV) ultimately are determined for *licensed operations*. This particular "regulatory baseline" can only be determined after installation of a complete wellfield package that includes the injection and production wellfield plan *and a monitoring well network* that is wellfield-specific.[13] Without groundwater quality sampling from the designated compliance wells in a given wellfield (e.g., 100 wells out of 600 in a given wellfield), as well as sampling from *each and every monitoring well* in the monitoring well network, this " regulatory baseline" cannot be determined.[14] On the other hand, the "preliminary baseline" in Strata's ER per NUREG-1569, Chapter 2, which is the "baseline" referred to in the Council's pleadings and which is within the scope of this proceeding,[15] is strictly limited to groundwater quality data that enables NRC Staff to determine the general boundaries and nature of the water in the proposed recovery zones versus the nature of the groundwater outside of these zones. To gather these data, the license applicant must install wells within the recovery zones which ultimately may become production wells and wells outside the recovery zone which ultimately may become part of the monitoring well network/system. This "pre-license baseline" versus the post-license "regulatory baseline" as

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proceeding like the Board's decision in this proceeding never addresses the form or substance of NUREG-1569, Chapters 2 and 5. *See generally* LBP-12-3.

[13] *See* NUREG-1569, page 5-37.

[14] It is plain from the Council's pleadings and expert affidavits that this "baseline" is what they are searching for in their contention.

[15] *See* 10 CFR § 2.309(f)(1)(iii); *see also Florida Power & Light Co.*, 52 NRC at 329.

reflected in NUREG-1569, Chapters 2 versus 5 also is reflected in the Commission definition of Part 40.32(e) permissible pre-license issuance construction activities as opposed to prohibited pre-license construction activities in the recently approved construction rulemaking. Thus, as will be shown below, the Licensing Board's error in LBP-12-3 is focused on its misunderstanding of the difference between "pre-license baseline" per NUREG-1569, Chapter 2 and post-license "regulatory baseline" per Chapter 5.

With that said regarding the two "baseline," NUREG-1569 is a Commission-approved guidance document that underwent notice and comment procedures and that is designed to provide ISR license or license amendment applicants with a clear understanding of the information necessary for NRC Staff to process ISR license applications. The fundamental bases for how ISR license applications are prepared, reviewed, and approved are contained in the aforementioned NUREG-1569:

> "The purpose of the Standard Review Plan (NUREG–1569) is to provide the NRC staff with guidance on performing reviews of information provided by the applicant, and to ensure a consistent quality and uniformity of staff reviews. Each section in the review plan provides guidance on what is to be reviewed, the basis for the review, how the staff review is to be accomplished, what the staff will find acceptable in a demonstration of compliance with the regulations, and the conclusions that are sought regarding the applicable sections in 10 CFR Part 40, Appendix A."

NUREG-1569 at 1.

Within this guidance document are the provisions intended to delineate the boundary between baseline groundwater quality sampling and analysis prior to issuance of an NRC license (Chapter 2 entitled *Site Characterization*)[16] and after issuance of such a license (Chapter 5 entitled *Operations*). Indeed, the portions of NUREG-1569 addressed in Chapters 2 ("preliminary

[16] The differences between Chapters 2 and 5 can be found in their titles, and it is logical that the Council's claim that Strata violated 10 CFR § 51.45 requirements for ERs should be focused narrowly on permissible requirements pre-license issuance in Chapter 2 as an ER and its associated baseline groundwater quality analysis reflect a pre-license issuance "site characterization."

baseline") and 5 ("regulatory baseline") described above presumably reflect the conclusions in the *HRI* case stating that:

> "Nor can the Intervenors salvage their argument by *conjecturing* that, when HRI establishes the groundwater baselines and UCLs, it *might* violate the prescribed procedures, and that a hearing would then be necessary to evaluate the sufficiency and credibility of HRI's data (Intervenors' Written Presentation at 42-43). This argument, if accepted, would effectively transmogrify license proceedings into open-ended enforcement actions: that is, licensing boards would be required to keep license proceedings open for the entire life of the license so Intervenors would have a continuing, unrestricted opportunity to raise charges of noncompliance. Neither the AEA nor NRC regulations contemplate, much less compel, such an outcome."

62 NRC 77, 94 (July 20, 2005).

Thus, this Licensing Board in LBP-12-3 and the *Dewey-Burdock* case in LBP-10-16 simply have ignored the fact that the license applicant is providing the information pre-license issuance requested by the Commission in NUREG-1569, Chapter 2 and multiple exhortations by the license applicants to consider carefully the applicability of Part 40.32(e) and its implementation as reflected in Chapters 2 and 5 of NUREG-1569.

Here, Strata seeks Commission review of this failure and a final determination on the applicability of the "construction" in Part 40.32(e) as reflected in the recently approved Construction rulemaking and Commission-approved guidance to ISR license applicants and licensees in NUREG-1569. The Licensing Board's decision does not account for years of ISR licensing process reviews wherein NRC regulations and guidance only require that a limited amount of groundwater quality sampling be obtained and analyzed to present an adequate general overview of proposed ISR project sites (i.e., "pre-license baseline") pre-license issuance. Indeed, NUREG-1569 specifically states:

> "[r]eviewers should keep in mind that the development and initial licensing of an *in situ* leach facility is *not based on comprehensive information.…reviewers*

> *should not expect that information needed to fully describe each aspect of all the operations will be available in the initial application.*"

NUREG-1569 at 2-1 & 2-2 (emphasis added).

This statement directly implicates Part 40.32(e)'s provisions as that regulation mandates a boundary for pre-NRC license issuance groundwater quality actions that cannot be crossed lest a license applicant be denied their requested license.

This fact is further supported in letters exchanged between the State of Wyoming's Department of Environmental Quality (WDEQ) and NRC Staff in 2009. These letters essentially show that, despite a State regulatory agency's demand for a complete "wellfield package"[17] for its permitting purposes, NRC prohibits the installation of a complete monitoring well network and, thus, effectively prohibits development of "regulatory baseline" at a given site prior to issuance of an NRC license:

> "The NRC staff's interpretation of 10 CFR 40.32(e) is that installation of a limited number of wells for pumping tests and baseline data collection for the site is permitted under 10 CFR 40.32(e). However, installation of the monitoring well network for a specific wellfield goes well beyond that needed for background data collection, and bears on how a licensee will ensure that public health and safety and the environment will be protected during operation. Accordingly, the NRC staff concludes that such activities are not permitted under 10 CFR 40.32(e) and can only be performed after a license is issued."

United States Nuclear Regulatory Commission, *Letter from Keith McConnell, Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate to John Cash, Manager, EHS and Regulatory Affairs, Lost Creek ISR, LLC* (July 24, 2009) (ML091520101).

Based on this, it is apparent that the Licensing Board makes no attempt in LBP-12-3 to account for the constraints placed on license applicants during the ISR licensing process and basically ignores over ten (10) years of NRC licensing experience from the date of NUREG-1569's

[17] A "wellfield package" includes the submission of all information necessary pursuant to NUREG-1569, Chapter 5, including installation of a complete monitoring well network in overlying and underlying aquifers and the full suite of injection and production wells, including baseline wells within the recovery zone and associated groundwater quality sampling data for analysis to determine appropriate UCLs and RTVs.

issuance to the present day. If a Licensing Board intends to overrule formally established Commission guidance to license applicants/licensees, then it should clearly state its intent and reasons for doing so. By deciding to admit Environmental Contention 1 in LBP-12-3, the Licensing Board renders an arbitrary and capricious ruling and the Commission should reverse and deny its admission as an impermissible attack on NRC regulations at Part 40.32(e) and Commission's formally approved guidance in NUREG-1569.

2. Environmental Contention 2 is Inadmissible As It is Outside the Scope of This Proceeding and Represents a Collateral Attack on NRC Regulations and Formally Approved Commission Guidance

In LBP-12-3, the Licensing Board also admits Environmental Contention 2 which alleges that Strata's license application "fails to evaluate the virtual certainty that [SEI] cannot restore groundwater to primary or secondary limits." LBP-12-3, slip op. at 32. The Licensing Board's determination appears to be based on two (2) factors: (1) the fact that a "bounding analysis" could be conducted to determine the potential impacts of an alternate concentration limit (ACL) prior to issuance of an NRC ISR license and (2) the fact that the requirement for a license amendment for each ACL does not relieve Strata and NRC Staff of NEPA requirements to assess potential impacts of an admittedly unknown and unknowable ACL that will not be developed until post-operation restoration efforts begin. *See id.* at 34-35. As was the case with the its admission of Environmental Contention 1, the Licensing Board's admission of Environmental Contention 2 demonstrates a fundamental lack of understanding of NRC regulations associated with ISR groundwater restoration, NRC's ISR licensing process, and historical ISR operations. As such, the Licensing Board renders an arbitrary and capricious ruling and the Commission should reverse and deny the admission of Environmental Contention 2 as outside the scope of

this proceeding and an impermissible attack on NRC regulations at Part 40.32(e) and the Commission's formally approved guidance in NUREG-1569.

First, the Licensing Board's admission of Environmental Contention 2 based on the possibility of performing a "bounding analysis" on the potential need for an ACL and that a license amendment will not provide adequate assessment of any failure to restore to primary or secondary standards directly implicates the regulatory scope of 10 CFR Part 40, Appendix A, Criterion 5(B)(5) and the Board's failure to properly consider the applicable scope of this proceeding in contravention of Commission jurisprudence. Based on Commission precedent,[18] the scope of this proceeding is strictly limited to the parameters outlined in the July 13, 2011 Federal Register notice, which limits the scope to Strata's requested licensing action. *See generally* 76 Fed. Reg. 41308 (July 13, 2011). As discussed in the aforementioned NUREG-1569 and several previous ISR license applications, the scope of an initial operating license application includes a required *commitment* by the license applicant to satisfy NRC's groundwater restoration requirements contained in Criterion 5(B)(5). *See* NUREG-1569 at Appendix B, B-2.[19] Commission policy regarding implementation of Criterion 5(B)(5) requirements mandates that the primary *goal* of ISR groundwater restoration is "regulatory baseline" or an MCL, whichever is higher. *See id.* at 7 ("restoration to pre-operational conditions is considered a primary goal whenever degradation of water outside of the exempted zone is a possibility."). Although the commitment to satisfy Criterion 5(B)(5) does provide the license applicant/licensee an opportunity to seek ACLs by right, NRC's licensing policy recognizes that an ACL only becomes potentially relevant at the commencement of, or during groundwater restoration, and

[18] *See* 10 CFR § 2.309(f)(1)(iii); *see also Florida Power & Light Co.*, 52 NRC at 329.
[19] *See also* United States Nuclear Regulatory Commission, *NRC Regulatory Issue Summary 2009-05: Uranium Recovery Policy Regarding: (1) The Process for Scheduling Licensing Reviews of Applications for New Uranium Recovery Facilities and (2) The Restoration of Groundwater at Licensed Uranium In Situ Recovery Facilities*, (April 29, 2009).

accordingly, cannot be addressed in an initial operating license application. For purposes of such groundwater restoration, NRC does not consider an ACL a primary or secondary goal within the scope of an initial operating license application, because it would violate NRC's longstanding policy regarding groundwater corrective action pursuant to Criterion 5(B)(5) (including restoration at ISR facilities and groundwater cleanup at conventional uranium milling facilities) that prohibits a licensee from restoring to the ACL without first trying to reach "regulatory baseline" or the aforementioned MCL.[20]

The fact that ACLs are outside the scope of this proceeding is supported by the scope of the necessary license amendment for any ACL before any such restoration standard can be approved. Several examples of ACL applications[21] submitted by uranium recovery licensees (both conventional uranium milling and ISR licensees) demonstrate that a full environmental impact analysis in accordance with relevant NRC guidance (currently NUREG-1748 entitled *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*)[22] and 10 CFR Part 40, Appendix A, Criterion 5(B)(6) is mandatory for approval of such an ACL. By requiring some form of "bounding analysis" for an ACL in an initial operating license application, the Licensing Board would be ordering an impossible, unnecessarily redundant and

[20] *See also* United States Nuclear Regulatory Commission, *Draft Final Staff Technical Position: Alternate Concentration Limits for Title II Uranium Mills*, (February, 1994) ("Under 10 CFR [Part] 40, Appendix A, Criterion 5(B)(6), NRC may approve ACLs for contaminants in ground water provided that the concentration limits are as low as is reasonably achievable considering practicable corrective actions….") This statement supports the discussion above by indicating that groundwater corrective action to return site groundwater to primary or secondary standards is required prior to applying for an ACL.

[21] As described in NUREG-1748, unless a proposed licensing action (new license or license amendment) is categorically excluded, such proposed action must be accompanied by at least an environmental assessment (EA) as contemplated under the Commission's 10 CFR Part 51 regulations. *See* NUREG-1748 at iii, 2-1, & 3-1. Currently, ACLs for ISR facilities are not categorically excluded.

[22] United States Nuclear Regulatory Commission, NUREG-1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*, (August, 2003).

entirely remote and speculative environmental analysis.[23] An ACL is a site-specific, wellfield-specific, constituent-specific,[24] risk-based standard that needs to be applied in the context of ISR restoration to the "regulatory baseline," which can only be developed by the licensee and approved by NRC Staff in an evaluation of a complete wellfield package as described in footnote 17 above.

Typically, the "regulatory baseline" has been established as an *average value* for a given constituent (e.g., an average of constituent values for each relevant constituent in one hundred (100) compliance wells in a 600 well wellfield) which necessarily implies about fifty (50) percent above and 50 percent below the "average" "regulatory baseline" value. To ask an ISR operator to assess this prior to even defining what "regulatory baseline" is, let alone prior to reaching conclusions on post- operational groundwater values after cessation of uranium recovery operations and the success or difficulties with restoration efforts would result in no license applications ever being filed. Thus, the Licensing Board's decision and its reasoning demonstrate that it failed to understand and to consider the scope of NRC requirements for Strata's license application. Therefore, the Licensing Board's decision to admit Environmental Contention 2 is an error of law in that it failed to properly interpret the scope of NRC's initial operating license applications under Criterion 5(B)(5).

[23] Indeed, the Council, as well as other ISR opponents, often argues that there are changes in groundwater conditions at ISR sites after commencement of licensed operations. Assuming *arguendo* that this is true, then it is absurd to require an environmental impact analysis of the need for an ACL when such analysis would be inapplicable to site conditions at the time an ACL would be required. Additionally, it is apparent that the Licensing Board failed to read and consider 10 CFR Part 40, Appendix A, Criterion 5(B)(6) which details the criteria to be addressed for an ACL, some of which cannot be addressed without knowing the specific constituent details. *See* 10 CFR Part 40, Appendix A, Criterion 5(B)(6).

[24] It is important to note that not all constituents in ISR site groundwater are considered to be potentially "hazardous" and, therefore, failure to restore to the average number designated as "regulatory baseline" may have virtually no potential, adverse public health impact.

Further, since as stated previously, ACLs are constituent-specific values that are wellfield-specific and since wellfields are developed in a phased, iterative manner over the course of a project developing a "bounding analysis" for ACLs for an entire project as part of an environmental evaluation is a fatuous concept that is totally impracticable. Indeed, NRC Staff merely requires an assessment of the first wellfield(s) in a license application because the ISR operator is constrained by Part 40.32(e) from delineating the entire uranium resource and, thus, cannot properly determine exactly the scope of each and every wellfield until after an NRC license is issued. Accordingly, there is no possible way under NRC regulations to conduct a "bounding analysis" on the potential environmental impacts of potential future ACLs for any given wellfield, much less for an entire project; but rather, it is appropriate to use NRC's license amendment process to address any potential impacts from any proposed ACL. Therefore, the Licensing Board's decision should be reversed as a collateral attack on 10 CFR Part 40.32(e).

Second, the Licensing Board's decision that the Council's claim of a violation of 10 CFR § 51.45 is an adequate basis for admission of this contention[25] centers on the alleged "virtual certainty" of Strata's failure to restore site groundwater to primary or secondary standards. Initially, this is a conclusory statement that can be deemed incorrect because Strata's license application shows restoration of the site's NuBeth's research and development (R&D) pilot to baseline.[26] However, whether or not this statement is true is irrelevant, because it is inconsistent with the precise language of Criterion 5(B)(5) which articulates three (3) standards for

[25] It also stands to reason that the Council's claims regarding a violation of 10 CFR § 51.45 can be disposed of based on the fact that the potential impacts of an ACL are not within the scope of this proceeding as, by definition, Strata could not include an analysis of the potential impacts of an unknowable ACL in its ER.

[26] Indeed, even counsel for the Council does not suggest that no ISR operation has ever restored some constituents to "regulatory baseline." Strata acknowledges that most ISR restoration actions have required *some* ACLs or State equivalents, while satisfying "regulatory baseline" or an MCL for most constituents. *See generally* Strata Oral Argument Transcript.

restoration, "regulatory baseline" *OR* an MCL, whichever is higher, *OR* an ACL. As stated above, NRC's implementation of this regulation requires that the licensee try to reach the *goal* of "regulatory baseline" first which reflects the Commission's longstanding policy for groundwater corrective action at uranium milling facilities. Nevertheless, after sufficient restoration efforts have been attempted and reach the as low as reasonably achievable (ALARA) threshold, the licensee is entitled per Criterion 5(B)(5) to seek a constituent-specific (whether hazardous or not) ACL that will not pose a substantial present or future hazard to human health or the environment. Thus, the Licensing Board's admission of this contention represents a collateral attack on NRC regulations at 10 CFR Part 40, Appendix A, Criterion 5(B)(5) and an attack on longstanding Commission policy implementing this regulatory process and should be denied as such.

V. CONCLUSION

For the foregoing reasons, the Commission should reverse the Licensing Board's rulings regarding standing and deny the Council's request for a hearing in its entirety. If the Licensing Board's standing determination in LBP-12-3 is upheld, then the Commission should reverse the Board's decision to admit Environmental Contentions 1 and 2. Further, given the complexity of the issues argued in this appeal, especially with respect to Strata's appeal of the admission of Environmental Contentions 1 and 2, and the potential industry impact of this appeal, Strata respectfully requests that the Commission grant oral argument for this appeal.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of:	)	
	)	Docket No.: 40-9091-MLA
STRATA ENERGY, INC.	)	Date: February 21, 2012
(Ross In Situ Uranium Recovery Facility)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "**APPLICANT STRATA ENERGY, INC'S APPEAL OF LBP-12-3**" in the above-captioned proceeding have been served via the Electronic Information Exchange (EIE) this 21st day of February, 2012, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the above-captioned proceeding.

Respectfully Submitted,

/Executed (electronically) by and in accord with 10 C.F.R. § 2.304(d)/
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Dated: February 21, 2012