UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	January 15, 2009
U.S. Department of Energy	)	
	)	
(License Application for Geologic Repository at Yucca Mountain)	)	Docket No. 63-001

ANSWER OF THE U.S. DEPARTMENT OF ENERGY TO A PETITION FOR LEAVE TO INTERVENE BY THE COUNTY OF INYO, CALIFORNIA ON AN APPLICATION BY THE U.S. DEPARTMENT OF ENERGY FOR AUTHORITY TO CONSTRUCT A GEOLOGIC HIGH-LEVEL WASTE REPOSITORY AT A GEOLOGIC REPOSITORY OPERATIONS AREA AT YUCCA MOUNTAIN, NEVADA

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I. INTRODUCTION

In accordance with 10 C.F.R. § 2.309 and 10 C.F.R. Part 63, and the Advisory Pre-Application Presiding Officer (PAPO) Board Order of June 17, 2008, the U.S. Department of Energy (DOE or the Department) hereby files its Answer to the "Petition for Leave to Intervene by the County of Inyo, California (Inyo County) on an Application by the U.S. Department of Energy for Authority to Construct a Geologic High-Level Waste Repository at a Geologic Repository Operations Area at Yucca Mountain, Nevada" (Petition), filed on December 22, 2008.[1] The Petition responds to the U.S. Nuclear Regulatory Commission's (NRC or Commission) Notice of Hearing and Opportunity to Petition for Leave to Intervene on an

[1] DOE is filing this Answer in advance of the deadline set by the Commission in its Hearing Notice. DOE recognizes, however, that Petitioners have the full time allotted by the Hearing Notice to file their replies. DOE's early filing does not affect the deadlines set by the Commission.

Application for Authority To Construct a Geologic Repository at a Geologic Repository Operations Area at Yucca Mountain, published in the *Federal Register* on October 22, 2008 (73 Fed. Reg. 63,029) (Hearing Notice). The Hearing Notice concerns DOE's License Application (Application or LA) for authorization to construct a geologic repository at Yucca Mountain, Nevada for the disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW).

To be admitted as a party to this proceeding, under 10 C.F.R. § 2.309, Inyo County must: (1) be in substantial and timely compliance with the Licensing Support Network (LSN) requirements imposed by 10 C.F.R. § 2.1003 at the time of its request for participation in the proceeding as provided in 10 C.F.R. § 2.1012(b)(1), and be in compliance with all orders of the Pre-License Application Presiding Officer (PAPO) regarding electronic availability of documents; (2) have legal standing to intervene in the proceeding pursuant to 10 C.F.R. § 2.309; and (3) submit at least one admissible contention in accordance with 10 C.F.R. § 2.309(f)(1). In addition to the NRC's contention admissibility requirements in 10 C.F.R. § 2.309(f), environmental contentions must also meet the requirements of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326.

Inyo County has not demonstrated that it is in substantial and timely compliance with its LSN obligations. DOE has no objection to its legal standing as an Affected Unit of Local Government. However, DOE does not believe that Inyo County has proffered any admissible contentions. Therefore, its Petition should be denied.

II. COMPLIANCE WITH LSN REQUIREMENTS

As a threshold matter, a petitioner seeking to participate in the licensing proceeding must demonstrate that it is in compliance with the NRC's LSN requirements.[2] Specifically, 10 C.F.R. § 2.1012(b) states that:

> A person, including a potential party given access to the [LSN] under this subpart, may not be granted party status under [10 C.F.R.] § 2.309 or status as an interested governmental participant under [10 C.F.R.] § 2.315, if it cannot *demonstrate substantial and timely compliance* with the requirements of [10 C.F.R.] § 2.1003 at the time it requests participation in the HLW licensing proceeding under § 2.309 or § 2.315.

Emphasis added.

Section 2.1012(c) additionally provides that the "Presiding Officer *shall not* make a finding of substantial and timely compliance pursuant to paragraph (b) of this section for any

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[2] 10 C.F.R. § 2.1003 (a) requires that "each other potential party, interested governmental participant or party shall make available [on the LSN] no later than ninety days after the DOE certification of compliance under 2.1009(b) – an electronic file including bibliographic header for all documentary material . . . generated by, or at the direction of, or acquired by, a potential party, interested governmental participant or party."

Each potential party, interested governmental participant or party is required thereafter to "continue to supplement its documentary material made available to the other participants via the LSN with any additional material created after the time of initial certification in accordance with [§ 2.1003(a)] until the discovery period in the proceeding has concluded." 10 C.F.R. § 2.1003(e).

10 C.F.R. § 2.1009 prescribes the following additional LSN requirements:

(a) Each potential party, interested government participant, or party shall –

(1) Designate an official who will be responsible for the administration of its responsibility to provide electronic files of documentary material;

(2) Establish procedures to implement the requirements of § 2.1003;

(3) Provide training to its staff on the procedures for implementation of the responsibility to provide electronic files of documentary material;

(4) Ensure that all documents carry the submitter's unique identification number;

(5) Cooperate with the advisory review process established by the NRC under § 2.1011(d).

(b) The responsible official designated under paragraph (a)(1) of this section shall certify to the [PAPO] that the procedures [specified above] have been implemented and that ….the documentary material specified in 2.1003 has been identified and made electronically available. The initial certification must be made [within 90 days of the DOE certification of compliance].

Each potential party also is "responsible for obtaining the computer system necessary to comply with the requirements for electronic document production and service." 10 C.F.R. § 2.1011(a).

person who is not in compliance with all applicable orders of the [PAPO Board]." 10 C.F.R. § 2.1012(c) (emphasis added).[3]

Further, § 2.309(a) states that, in ruling on a petition to intervene in this proceeding, the presiding officer shall consider "any failure of the petitioner to participate as a potential party in the pre-license application phase" governed by 10 C.F.R. Part 2, Subpart J.[4]

The Board should deny Inyo County's Petition because Inyo County has not demonstrated that it is in substantial and timely compliance with the foregoing requirements. Although a "potential party" in the pre-licensing proceeding phase was required only to "certify" its good-faith compliance with LSN requirements, a "petitioner" like Inyo County bears the burden to "demonstrate" LSN compliance. As the PAPO Board held, 10 C.F.R. § 2.1012(b)(1) "operates to deny a person party status *unless it shows* substantial and timely compliance with the requirements of § 2.1003." *U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters), LBP-04-20, 60 NRC 300, 315 n.28 (2004) (emphasis added). Inyo County's Petition is entirely silent about its LSN obligations. Inyo County has thus failed

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[3] The PAPO Board has issued a series of Case Management Orders that impose certain requirements regarding privilege claims for documentary material on the LSN. One of those orders also requires each participant to supplement its LSN production each month with newly created or discovered documentary material, and to file a certification with the PAPO Board when the monthly supplement is made. Revised Second Case Management Order § VI(A) (July 6, 2007).

[4] Compliance with LSN requirements is crucial to the efficient conduct of this proceeding, insofar as the LSN is designed to enable "the comprehensive and early review of the millions of pages of relevant licensing material by the potential parties to the proceeding, so as to permit the earlier submission of better focused contentions resulting in a substantial saving of time during the proceeding." Final Rule, Submission and Management of Records and Documents Related to the Licensing of a Geologic Repository for the Disposal of High-Level Radioactive Waste, 54 Fed. Reg. 14,925, 14,926 (Apr. 14, 1989) (amending hearing rules for adjudication on application for a license to receive and possess HLW and establishing basic LSN procedures) (Final Rule, Documents Related to the Licensing of Geologic Repository). It also is intended to facilitate the sharing of information between DOE, the NRC Staff, and the admitted parties throughout the licensing process. *See* Final Rule, Licensing Proceeding for a High-Level Radioactive Waste Geologic Repository: Licensing Support Network, Submissions to the Electronic Docket, 69 Fed. Reg. 32,836, 32,840 (June 14, 2004) ("[A]n LSN participant does have an obligation to maintain its existing LSN collection intact and available for the balance of the construction authorization proceeding.") (Final Rule, LSN, Submissions to the Electronic Docket).

altogether to address this threshold requirement for intervention, and the Board therefore cannot find that Inyo County is in substantial and timely compliance in light of the County's silence.

Inyo County, moreover, did not file monthly supplemental LSN certifications as required by the PAPO Board's Case Management Orders. Inyo County made its initial LSN certification in November, 2006. *See* SECY-07-0018, LSN Administrator Semiannual Report (January 12, 2007) at 6. Accordingly, after DOE made its initial LSN certification in October, 2007, Inyo County was required to update its LSN production on a monthly basis and file a supplemental certification by the first of each month attesting to its compliance starting with November, 2007. *See* Revised Second Case Management Order § VI(A) (July 6, 2007). In contravention of that requirement, Inyo County did not file any supplemental certification until 13 months later, in December, 2008. Inyo County Certification of Licensing Support Network Supplementation (December 18, 2008) (filed in ASLBP No. 04-829-01-PAPO).

Equally important, Inyo County's LSN production is materially incomplete on its face. Although the nature of Inyo County's non-compliance does not require identification of specific documentary material that has been omitted, to determine that it is not in compliance, there is ample evidence that Inyo County has failed to conduct a proper review and that alone constitutes non-compliance. A petitioner cannot demonstrate that it is in substantial and timely compliance if it has not properly looked for all its documentary material.

That principle was made clear when Nevada successfully struck DOE's LSN certification in 2004. Nevada argued, and the PAPO Board agreed, that DOE was not compliant at that time because it had not completed its review of emails and other documents. The PAPO Board did not require Nevada to identify specific emails and other documents that DOE should have made available but did not. Rather, the PAPO Board held that DOE's production effort could not be

considered reasonable if it had not performed a proper collection and review effort. *Dep't of Energy*, 60 NRC at 321-26.

That is the situation here. Inyo County was recognized as an AULG in 1991, and from 1991 through 2007, received $5.76 million for oversight activities under the NWPA as well as an additional $6.4 million from DOE for hydrological studies since March, 2002. Inyo County's Draft Comprehensive Impact Assessment (November 6, 2007) at 7 [LSN No. CAL000000028]. Yet, based on DOE's review, Inyo County's LSN collection consists of merely 33 documents.

Inyo County made available only 4 of those documents when it initially certified and added the remainder in sporadic installments thereafter. *See* SECY-07-0018, LSN Administrator Semiannual Report (January 12, 2007) at 6 (stating that Inyo County's LSN collection contained 4 documents at initial certification); SECY-07-0130, LSN Administrator Semiannual Report (August 7, 2007) at 6 (stating that Inyo County added only 17 documents in the first half of 2007); SECY-08-0011, LSN Administrator Semiannual Report (January 25, 2008) at 7 (stating that Inyo County added only 2 documents in the second half of 2007); SECY-08-0104, LSN Administrator Semiannual Report (July 23, 2008) at 4 (stating that Inyo County added only 1 document in first half of 2008). All but 3 of the documents in Inyo County's LSN collection—LSN Nos. CAL000000006; CAL000000031; and CAL000000032—are dated 2004 and later, leaving 13 years of Inyo County's effort essentially unaccounted for in its production.

The topic of groundwater flow illustrates the shortcoming in Inyo County's production. Half of Inyo County's proposed contentions concern potential effects of the Yucca Mountain repository on groundwater in Inyo County, *see* Inyo County Contentions Nos. 1-6, and by its own description, Inyo County has conducted "numerous scientific studies" on such groundwater issues since 1996. Inyo County's Draft Comprehensive Impact Assessment (November 6, 2007)

at 8 [LSN No. CAL000000028]. Those studies included the following types of research: geological mapping; construction of a monitoring well on the eastside of the Southern Funeral Mountain Range; geophysical surveys of portions of the Amargosa Valley and Death Valley; geochemical sampling and testing of springs and wells in Death Valley National Park; and numerical groundwater modeling in the Amargosa Valley and Southern Funeral Mountain Range. Inyo County Comments on Draft Repository Supplemental Environmental Impact Statement and Draft Nevada Rail Corridor/Alignment Environmental Impact Statement (December 18, 2007) at Supplement, page 1 [CAL000000024].

That work was performed by and under the direction of John Bredehoeft and his company, Hydrodynamics Group, LLC. *See* Affidavit of John Bredehoeft ¶¶ 1-2 [Attachment 1 to Inyo County Petition]. While Inyo County has made available on the LSN certain reports and studies by Hydrodynamics Group, absent from Inyo County's production is the extensive graphic-oriented documentary material that would be generated in the course of performing the groundwater research undertaken by Inyo County and described in Hydrodynamic Group's reports.[5]

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[5] Graphic-oriented documentary material is defined in 10 C.F.R. § 2.1003(a)(2) as including "raw data, computer runs, computer programs and codes, field notes, laboratory notes, maps, diagrams and photographs . . . ." Additional examples provided in that regulation are:

(i) Calibration procedures, logs, guidelines, data and discrepancies;

(ii) Gauge, meter and computer setting;

(iii) Probe locations;

(iv) Logging intervals and rates;

(v) Data logs in whatever form captured;

(vi) Text data sheets;

(vii) Equations and sampling data;

(viii) Sensor data and procedures;

(ix) Data descriptions;

(x) Field laboratory and notebooks;

In fact, just 7 of the electronic files in Inyo County's LSN collection are graphic-oriented documentary material. They are certain logs associated with the testing of two wells in 2004. *See* LSN Nos. CAL000000010; CAL000000011; CAL000000013; CAL000000014; CAL000000019; CAL000000020; and CAL000000021. Absent altogether from Inyo County's production are such graphic-oriented documentary material as scientific notebooks and field notes by Hydrodynamics Group personnel, the computer programs and codes they used for their models and calculations; runs generated by their models; and logs from all the other wells and springs they analyzed since 1996.

Inyo County relies critically on Hydrodynamic Group's research to support its proposed contentions on groundwater flow. Inyo County accordingly was required to make available all the graphic-oriented documentary material that Hydrodynamic Group generated in the course of that research since 1996. That material is information that either supports Inyo County's intended positions in the licensing proceeding or, conversely, does not support those positions. In either instance Inyo County was required to make them available on the LSN.

Further, Inyo County's LSN collection is devoid of any internal documentation such as memoranda and emails among Hydrodynamic Group personnel. The absence of any such documents for the entire twelve years Hydrodynamic Group has been conducting research for Inyo County indicates that Inyo County has not made a substantial good-faith effort to identify and make available all its non-supporting information.

(xi) Analog computer, meter or other device print-outs;

(xii) Digital computer print-outs;

(xiii) Photographs;

(xiv) Graphs, plots, strip charts, sketches; and

(xiv) Descriptive material related to the foregoing information.

The material deficiencies in Inyo County's production are not confined to its groundwater contentions either. Two of Inyo County's twelve contentions concern the volcanic field in the Greenwater Range in Inyo County. *See* Inyo County Contentions Nos. 8-9. Those contentions are supported by Eugene Smith, who states that they "are based upon research conducted by me and scientific colleagues." Affidavit of Eugene Smith ¶ 4. Smith states that he has performed this work for Inyo County since 2007. *Id*. ¶ 1. Yet, DOE's review of Inyo County's entire LSN collection identified no documents authored by Smith or otherwise concerning his referenced research.

Similarly, Inyo County's contention regarding socioeconomic impacts, Contention No. 10, refers to alleged data but provides no citation to any documentary material available on the LSN or accompanying Inyo County's Petition. *See* Petition at 81-83. It thus appears that Inyo County did not make available on the LSN its supporting information regarding this contention nor, presumably, any non-supporting information either, assuming the County even undertook a search for such information.

In sum, Inyo County has not demonstrated that it is in substantial and timely compliance with LSN obligations. Inyo County's Petition is silent, it has not complied with applicable orders of the PAPO Board, and the evidence from Inyo County's production defeats any finding of compliance. The Board should deny Inyo County's Petition as a result.[6]

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[6] C.F.R. § 2.1012(b)(1) is clear that a potential party "may not be granted" party status or participate under 10 C.F.R. § 2.315(c) if it cannot demonstrate substantial and timely compliance "at the time it requests participation." 10 C.F.R. § 2.1012(b)(2) makes clear that the time to cure any such failure to meet LSN requirements is *after* party status or the right to participate has been "denied," and not in any such Reply.

Inyo County may not "cure" this or any other defect in its Petition, in its Reply pursuant to 10 C.F.R. § 2.309(h)(2). It is well recognized that "[r]eplies must focus narrowly on the legal or factual arguments first presented in the original petition or raised in the answers to it." *Nuclear Mgmt Co., L.L.C.* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006) (citing cases); *see Louisiana Energy Servs., L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004) (citing Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2203 (Jan. 14, 2004)). Replies cannot be used to "expand the scope of the arguments set forth in the original hearing request," nor should they be used to introduce new bases for

III. LEGAL STANDING

Because the Commission has stated that "[a]ny AULG [Affected Unit of Local Government] seeking party status shall be considered a party to this proceeding, provided that it files at least one admissible contention" Hearing Notice, 73 Fed. Reg. at 63,031, DOE has no objection to Inyo's legal standing.

IV. ADMISSIBILITY OF CONTENTIONS

A. Applicable Legal Standards and Relevant NRC Precedent

1. Petitioner Must Submit at Least One Admissible Contention to be Admitted as a Party

To be admitted as a party in the Yucca Mountain licensing proceeding, a petitioner must proffer at least one admissible contention. *See* 10 C.F.R. §§ 2.309(a), 2.309 (d)(2)(iii). The NRC will deny a petition to intervene from a petitioner who has complied with the LSN requirements and has demonstrated standing to intervene, but who has not proffered at least one admissible contention. *See generally*, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 5 (2001). As the Commission has observed, "[i]t is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions and demonstrate that a genuine dispute exists within the scope of this proceeding." *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). "A contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions." *Statement of*

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contentions submitted with the original petition. *See Nuclear Mgmt Co., L.L.C.*, CLI-06-17, 63 NRC at 732. Additionally, the Advisory PAPO Board explicitly stated that "[r]eplies shall be limited to addressing points that have been raised in answers." *U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters, Advisory PAPO Board), LBP-08-10, 67 NRC __ (slip op. at 9) (June 20, 2008).

DOE reserves the right to move to strike any portions of any Replies that fail to adhere to these limitations or to seek other relief as appropriate.

Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998). Finally, "government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else." *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 568 (2005).

2. Petitioner in this Proceeding Has a Heightened Obligation to Proffer Well Pled and Adequately Supported Contentions Given the Availability of the LSN

As the Commission has noted, this proceeding involves a number of "unique facts and circumstances"—one of those being the development of the LSN as a substitute for traditional document discovery. In developing this system, the NRC sought both to streamline the discovery process *and* to facilitate submittal of well-pled contentions:

> Another efficiency the [LSN] provides is reducing the effort consumed in carrying out document discovery and allowing more effort to be spent in case preparation. Because access to these documents is provided *before* the application is docketed, each party can focus on formulating meaningful contentions before the licensing hearing begins. *There should be no excuse for poorly crafted contentions, and the licensing board can reduce hearing delays by readily rejecting or otherwise disposing of unfocused or unsupported contentions.* Likewise, the [LSN] rule places tighter restrictions on amending or adding contentions late in the hearing processes because the [LSN] affords the parties an opportunity to raise and resolve issues earlier than what traditionally has been possible.

SECY-95-153, Memorandum from James M. Taylor, Executive Director of Operations, to the Commissioners, "Licensing Support System Senior Management Team Recommendations on Direction of the Licensing Support System," June 14, 1995, *available at* LEGACY ADAMS Accession No. 9506280652 (emphasis added).

In issuing the final LSN rule nearly a decade later, the Commission noted that "the history of the LSN and its predecessor . . . makes it apparent it was the Commission's expectation that the LSN, among other things, would provide potential participants with the

opportunity to frame focused and meaningful contentions" and avoid potential discovery-related delays. Final Rule, LSN, Submissions to the Electronic Docket, 69 Fed. Reg. at 32,843. The Commission added that "[t]hese objectives are still operational." *Id*. In fact, in a recent adjudicatory order related to this proceeding, the Commission reaffirmed these objectives:

> The use of the LSN was intended, among other things, to "enabl[e] the comprehensive and early review of the millions of pages of relevant licensing material by the potential parties to the proceeding, so as to permit the earlier submission of better focused contentions resulting in a substantial saving of time during the proceeding."

U.S. Dep't of Energy (High-Level Waste Repository: Pre-Application Matters), CLI-08-12, 67 NRC __ (slip op. at 8) (June 17, 2008).

And in fact, DOE's production of documentary material on the LSN fulfilled those objectives. DOE first made documentary material available on the LSN in 2004, when it publicly released approximately 1.3 million documents. Transcript of Record at 540, *U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters), ASLBP No. 04-8239-01-PAPO (July 12, 2005). DOE made another 2.1 million documents publicly available on the LSN in April, 2007—more than a year before it submitted the LA. Policy Issue Information Memorandum, SECY-07-0130, August 7, 2007, *available at* ADAMS No. ML071930440 at 5. DOE regularly added documents to the LSN each month thereafter, and in October, 2007, DOE certified that all its extant documentary material was available on the LSN. The Department of Energy submitted its Certification of Compliance on October 19, 2007. DOE has since then updated its LSN production each month with new documentary material that it has generated, received, or identified. *See, e.g.,* The Department of Energy's Certification of Licensing Support Network Supplementation (November 1, 2007); *see also* Revised Second Case Management Order, ASLBP No. 04-829-01-PAPO (July 6, 2007) at 21 (requiring monthly supplemental

production on LSN of documentary material created or discovered after party's initial LSN certification).

Altogether, DOE has made more than 3.5 million documents available on the LSN. *U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters), LBP-08-01, 67 NRC __ (slip op. at 11) (January 4, 2008) (stating that "it is not disputed that DOE has made available a massive amount of documentary material—3.5 million documents, amounting to over 30 million pages, including redacted versions of some privileged documents and privilege logs for hundreds of others."). That production includes documents that DOE cites and relies upon in the LA. It includes extensive underlying calculations, data, and other material on which those documents are based. Further, as required by regulation, it also includes documents with information that does not support the information DOE intends to cite or rely upon in the licensing proceeding. 10 C.F.R. § 2.1001 (definition of "documentary material").

DOE's extensive production substantially heightens Inyo's ability—*and its corresponding obligation*—to proffer focused and adequately supported contentions in this proceeding. As the Commission observed in rejecting a challenge to DOE's initial LSN certification, "potential parties had access to millions of DOE documents upon which to begin formulating meaningful contentions" during the period following that certification, as contemplated by the Commission's regulations. *U.S. Dep't of Energy*, CLI-08-12, 67 NRC __ (slip op. at 9). Indeed, because of DOE's early production of documentary material on the LSN starting 4 years before LA submittal, every potential party has had an even greater opportunity than the regulations contemplate to use those materials to develop contentions.

Based on the above circumstances, Inyo must be held to a particularly heightened burden to proffer well-pled and adequately supported contentions. Inyo is a singularly well-positioned

participant that has had the legal and technical resources to review DOE's documentary material to develop contentions, and has used those resources over the years for that very purpose.

Therefore, the petition to intervene must be denied.

3. Proffered Contentions Must Meet All of the Contention Admissibility Requirements of 10 C.F.R. § 2.309(f)(1) as Well as the Requirements of the Applicable June 20, 2008 and September 29, 2008 Case Management Orders

Section 2.309(f)(1) requires a petitioner to "set forth with particularity the contentions sought to be raised," and to satisfy the following six criteria: (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the licensing action that is the subject of the proceeding; (5) provide 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; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(i)-(vi). *A failure to comply with any one of the six admissibility criteria is grounds for rejecting a proffered contention*. *See* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004) (emphasis added); *see also Private Fuel Storage L.L.C.*, (Independent Spent Fuel Storage Installation) CLI-99-10, 49 NRC 318, 325 (1999).

The purpose of these six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision." Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2202. The current contention admissibility standards are "strict by design," *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *recons. denied*, CLI-02-1, 55 NRC 1 (2002), and were intended to "raise

the threshold for the admission of contentions." Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168 (Aug. 11, 1989); *see also Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999). As explained above, the availability of the LSN further raises this threshold for the admission of a contention in this proceeding. In revising its Part 2 rules in 2004, the Commission reiterated that the standards are "necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues." Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2189-90 (stating that the NRC "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing"); *id*. at 2202.

Strict application of these contention admissibility criteria in this proceeding is critically important. The vast number of contentions submitted and the "rigorous schedule" imposed by the NWPA and Appendix D to Part 2 present unprecedented challenges to the conduct of a timely, effective, and focused adjudication. Recognizing these challenges, the Advisory PAPO Board, with the Commission's express approval, issued its Case Management Order "to help both potential parties and licensing boards address the admissibility of contentions in any HLW proceeding effectively and efficiently." *U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters, Advisory PAPO Board), LBP-08-10, 67 NRC __ (slip op. at 3) (June 20, 2008) (Case Management Order).[7] That Order imposes numerous format requirements for proffered contentions. Failure to adhere to these format requirements may provide an additional

[7] A second case management order was issued. *See U.S. Dep't of Energy* (Regarding Contention Formatting and Tables of Contents), LBP-08-10, 67 NRC __ (September 29, 2008).

basis for rejection of proffered contentions should a potential party significantly and in bad faith ignore these requirements. *Id.* at 3, 5-9.

The six contention admissibility criteria set forth in § 2.309(f)(1), and the related pleading requirements contained in the Case Management Order, are discussed further below.

a. Petitioner Must Specifically State the Issue of Law or Fact to Be Raised

Section 2.309(f)(1)(i), the first admissibility criterion, requires that a petitioner "provide a specific statement of the issue of law or fact to be raised or controverted," by "articulat[ing] at the outset the specific issues [it] wish[es] to litigate as a prerequisite to gaining formal admission as [a party]." *Duke Energy Corp*., CLI-99-11, 49 NRC at 338. To be admissible, a contention "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." *Dominion Nuclear Conn., Inc.*, CLI-01-24, 54 NRC at 359-60. Section 2.309(f)(1)(i) "bar[s] contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'" *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 424 (2003) (quoting *Duke Energy Corp*., CLI-99-11, 49 NRC at 337-39). Elaborating further on this requirement, the June 20, 2008, Case Management Order for this proceeding requires "narrow, *single-issue* contentions" that are "sufficiently specific as to define the relevant issues for eventual rulings on the merits, and not require" extensive narrowing or clarification by the parties or boards. *U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 6) (emphasis added).

b. Petitioner Must Briefly Explain the Basis for the Contention

Section 2.309(f)(1)(ii) requires that a petitioner provide "a brief explanation of the basis for the contention." *See also* Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170. This includes "sufficient foundation" to

"warrant further exploration." *Public Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 428 (1990) (footnote omitted). A petitioner's explanation serves to define the scope of a contention, as "[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases." *Public Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *petitions denied in part, granted in part, Mass. v. U.S. Nuclear Regulatory Comm'n*, 924 F.2d 311 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 899 (1991). The Board, however, must determine the admissibility of the contention itself, not the admissibility of individual "bases." *Duke Energy Corp*. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 n.45 (2002).

c. Petitioner Must Demonstrate that the Issue Raised in the Contention is Within the Scope of the Proceeding

Section 2.309(f)(1)(iii) requires that a petitioner demonstrate "that the issue raised in the contention is within the scope of the proceeding." The scope of the proceeding is defined by the Commission's Notice of Hearing and the NRC regulations governing review and approval of the Application. *See, e.g.*, *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). Contentions are necessarily limited to issues that are germane to the specific application pending before the Board. *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 204 n.7 (1998). Any contention that falls outside the specified scope of this proceeding – as discussed further below – must be rejected. *See, e.g.*, *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 639 (2004).

A contention that challenges an NRC rule is outside the scope of this proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding…." 10 C.F.R. § 2.335(a). This includes contentions that advocate

stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking. *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 159 (2001), *aff'd on other grounds*, CLI-01-17, 54 NRC 3. For instance, any direct or indirect challenge to the current EPA standard or NRC implementing rule is a collateral attack and is outside the scope of the proceeding. Moreover, Nevada challenged the EPA rule in federal court and thus this proceeding is the wrong forum to once again raise such a challenge.

In addition, any contention that collaterally attacks applicable statutory requirements or the basic structure of the NRC regulatory process must also be rejected by the Board as outside the scope of the proceeding. *Carolina Power & Light* (Shearon Harris Nuclear Power Plant Units 1), LBP-07-11, 65 NRC 41, 57-58 (citing *Philadelphia Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974)). Accordingly, a contention that simply states the petitioner's views about what the regulatory policy should be does not present a litigable issue. *See Philadelphia Elec. Co.*, ALAB-216, 8 AEC at 20-21, 21 n.33. Similarly, challenges to the adequacy of the NRC Staff's safety review process, including the contents of its SER, are outside the scope of this proceeding. "The NRC has not, and will not, litigate claims about the adequacy of the Staff's safety review in licensing adjudications." *AmerGen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC __ (slip op. at 13-14) (Nov. 6, 2008).

Furthermore, asserting that generalized "uncertainties" exist in postclosure models or data, without showing in any way, how or why those uncertainties call into question the conclusions reached by DOE, or findings the NRC must make in its review of the LA, is not a sufficient basis for an admissible contention. To merely assert the existence of such

uncertainties, without specifying their impact on a finding NRC must make in its issuance of the construction authorization, amounts to an improper challenge to Part 63, which explicitly recognizes that such uncertainties exist and cannot be eliminated. The Commission, in the Statements of Consideration accompanying Part 63, expressly rejected requests made by several commenters to define an acceptable level of uncertainty in Part 63, finding it "neither practical nor appropriate." Final Rule, Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, NV, 66 Fed. Reg. 55,732, 55,747-748 (Nov. 2, 2001). The Commission "decided to adopt EPA's preferred criterion of 'reasonable expectation' for purposes of judging compliance with the postclosure performance objectives [since] ... a standard of 'reasonable expectation' allows it the necessary flexibility to account for the inherently greater uncertainties in making long-term projections of a repository's performance." *Id*. at 55,740. This flexibility encompasses consideration of the use, as appropriate, of cautious but reasonable approaches consistent with present knowledge in lieu of bounding or more conservative approaches. *See, e.g.,* 10 C.F.R. §63.305(c).

The following examples from 10 C.F.R. § 63.101 are illustrative of the reasonable expectation standard:

- "Proof that the geologic repository will conform with the objectives for postclosure performance is not to be had in the ordinary sense of the word because of the uncertainties inherent in the understanding of the evolution …."
- "[W]hat is required is reasonable expectation, making allowance for the …uncertainties involved, that the outcome will conform with the objectives for postclosure…."
- "[D]emonstration of compliance must take uncertainties and gaps in knowledge into account so that the Commission can make the specified finding…."

10 C.F.R. § 63.304 describes the characteristics of reasonable expectation by stating that reasonable expectation:

- Requires less than absolute proof because absolute proof is impossible to attain for disposal due to the uncertainty of projecting long-term performance;
- Accounts for the inherently greater uncertainties in making long-term projections of the performance of the Yucca Mountain disposal system;
- Does not exclude important parameters from assessments and analyses simply because they are difficult to precisely quantify to a high degree of confidence; and
- Focuses performance assessments and analyses on the full range of defensible and reasonable parameter distributions rather than only upon extreme physical situations and parameter values.

In addition, 10 C.F.R. § 63.305(c) makes clear that, in the context of reasonable expectation, conservative means the use of cautious but reasonable assumptions consistent with present knowledge.

Given the obligation of the Commission under section 801(b) of the Energy Policy Act of 1992 (EPACT) to modify its technical requirements and criteria under section 121(b) of the NWPA to be consistent with the radiological protection standards promulgated by the Environmental Protection Agency (EPA) under section 801(a) of EPACT, the proper application of the reasonable expectation standard must take into account the statements by EPA in promulgating the standards required by EPACT.[8] These statements make clear that, while

[8] *See* Final Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 66 Fed. Reg. 32,074, 32,101-03 (June 13, 2001) (section III.B.2.c titled "What Level of Expectation Will Meet Our Standards?"); *see also* Proposed Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 70 Fed. Reg. 49,014, 49,020-21 (August 22, 2005) (section I.A.1.c titled "What is "Reasonable Expectation?"); Final Rule, Public Health and Environmental Radiation Protection Standards for

reasonable assurance and reasonable expectation are similar concepts, the evaluation of the Yucca Mountain repository requires a different level and type of technical proof than required for reactors and other situations licensed by NRC in the past.[9] Reasonable expectation recognizes that, in the context of the Yucca Mountain repository, "unequivocal numerical proof of compliance is neither necessary nor likely to be obtained,"[10] and while some "sources of uncertainty can be addressed, or at least accounted for while in other [data or model] areas our knowledge may be too limited to even characterize the uncertainty, much less explicitly account for it."[11] Identifying postclosure uncertainties, without specifying their impact on whether the reasonable expectation standard is met, does not provide an adequate basis to admit a contention.

Therefore, in formulating its contentions, the initial burden is on the petitioner to explain the implications of alleged uncertainties and show why, if true, they exceed the range of acceptable (and unavoidable) uncertainties clearly reflected in the regulations, particularly the reasonable expectation standard set forth in 10 C.F.R. § 63.101. Any contention attempting to shift that burden to the applicant is an improper challenge to 10 C.F.R. § 2.309. *See Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Power Station), LBP-06-23, 64 NRC 257, 358-59 (2006). DOE's responses to specific contentions identify where these pleading requirements have been violated.

Finally, as discussed, *infra*, the following subjects, *among others*, are plainly outside the scope of this proceeding: (1) contentions challenging DOE's compliance with guidance

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Yucca Mountain, NV, 73 Fed. Reg. 61,256, 61,271-73 (October 15, 2008) (section III.A.4 titled "How Did We Consider Uncertainty and Reasonable Expectation?").

[9] *See* Final Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 66 Fed. Reg. at 32,101.

[10] Proposed Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 70 Fed. Reg. at 49,021.

[11] Final Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 73 Fed. Reg. at 61,271, n.22.

contained in the YMRP (as opposed to compliance with NRC regulations); (2) contentions challenging DOE's transportation of SNF and HLW to Yucca Mountain; (3) contentions challenging DOE's LSN certification; (4) contentions challenging DOE's compliance with non-NRC permits; and (5) contentions challenging permanent closure of the geologic repository.

d. Petitioner Must Demonstrate That Each Contention Raises a Material Issue

Section 2.309(f)(1)(iv) requires that a petitioner "[d]emonstrate that the issue raised in the contention is *material* to the *findings the NRC must make to support the action* that is involved in the proceeding." Emphasis added. As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of the licensing proceeding.'" *Duke Energy Corp*., CLI-99-11, 49 NRC at 333-34; *see also* Rules of Practice for Domestic Licensing Proceedings–Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,172. Thus, each contention must be one that, if proven, would entitle the petitioner to relief. *Yankee Atomic Elec. Co.* (Yankee Power Station), CLI-96-7, 43 NRC 235, 244 (1996). The Case Management Order states that this criterion "requires citation to a statute or regulation that, explicitly or implicitly, has not been satisfied by reason of the issue raised in the contention." *U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 7).

The "findings the NRC must make to support" the issuance of a construction authorization for a geologic repository are set forth in 10 C.F.R. § 63.31. To authorize construction of the repository, the NRC must determine that:

- there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received and possessed in a geologic repository operations area of the design proposed without unreasonable risk to the health and safety of the public;

- there is reasonable expectation that the materials can be disposed of without unreasonable risk to the health and safety of the public; and

- there is reasonable assurance that the activities proposed in the application will not be inimical to the common defense and security.

In short, the NRC must determine the validity of DOE's conclusions concerning the ability of the repository design to limit exposure to radioactivity, both during the construction and operation phase of the repository (*i.e.*, preclosure phase) and during the phase after the repository has been filled, closed, and sealed (*i.e.*, postclosure phase).

In making these determinations, the NRC must evaluate DOE's compliance with the applicable provisions of Part 63, including, among other things, whether DOE has described the proposed geologic repository as specified in § 63.21, and whether the site and design comply with the Part 63 performance objectives and requirements. Proposed safety contentions that fail to raise issues that are material to these findings are inadmissible. For example, Part 63 permits DOE to use probabilistic analyses to calculate potential postclosure radiation doses, 10 C.F.R. § 63.102(j), and to report those doses as *mean* doses. *See* 10 C.F.R. § 63.303. Therefore, contentions that either independently or cumulatively, fail to demonstrate an increase in the mean dose *above regulatory limits* are immaterial and inadmissible because they would not "make a difference in the outcome of the licensing proceeding." *Duke Energy Corp*., CLI-99-11, 49 NRC at 333-34.

e. Petitioner Must Demonstrate that Each Contention is Supported by Adequate Factual Information and/or Expert Opinion

Section 2.309(f)(1)(v) requires a petitioner to present the factual information or expert opinions necessary to support its contention adequately, and failure to do so requires the Board to reject the contention. *See also Yankee Atomic Elec. Co.*, CLI-96-7, 43 NRC at 262 (in referencing 10 C.F.R. § 2.714, the predecessor to 10 C.F.R. § 2.309, the Commission stated that petitioners must present "claims rooted in fact, documents, or expert opinions"). A petitioner is

"obligated to put forward and support contentions when seeking intervention, based on the application and information available" by examining the application and publicly available information. *Consumers Energy Co*. (Palisades Nuclear Power Plant) CLI-07-18, 65 NRC 399, 414 n.46 (2007).

As explained above, the LSN heightens a petitioner's already "ironclad" obligation to furnish adequate support because "early access to . . . documents in an electronically searchable form [has] allow[ed] for a thorough and comprehensive technical review of the license application by all parties and potential parties to the HLW licensing proceeding." Final Rule, LSN, Submissions to the Electronic Docket, 69 Fed. Reg. at 32,837. Thus, where a petitioner neglects to provide the requisite support for its contentions, the Board may not—and in this case absolutely should not—make assumptions of fact that favor the petitioner or supply information that is lacking. *See Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Unit Nos. 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

Vague references to documents are not permissible. A petitioner must identify specific portions of the documents on which it relies. *See Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), CLI-89-03, 29 NRC 234, 240-41 (1989). Moreover, the mere incorporation of massive documents by reference is unacceptable. *See Tenn. Valley Auth.* (Browns Ferry Nuclear Plant, Units 1 and 2), LBP-76-10, 3 NRC 209, 216 (1976). Consistent with these requirements, the Case Management Order directs petitioners to ensure that documentary references "be as specific as reasonably possible." *U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 7). Additionally, it requires that supporting documents (with the exception of readily available legal authorities, copyright-restricted material, and LSN documentary material), be electronically

attached to the petition. In citing LSN documents, petitioners must include the LSN accession number as well as the title, date, and relevant pages of the document.

A petitioner also must explain the significance of any factual information upon which it relies. *See Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003). With respect to factual information or expert opinion proffered in support of a contention, "the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention." *Private Fuel Storage* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998), *aff'd on other grounds*, CLI-98-13, 48 NRC 26. Any supporting material provided by a petitioner, including those portions thereof not relied upon, is subject to Board scrutiny, "both for what it does and does not show." *See Yankee Atomic Elec. Co.*, LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds and remanded*, CLI-96-7, 43 NRC 235 (1996). The Board should examine documents to confirm that they support the proposed contention(s). *See Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-04, 31 NRC 333 (1990). A petitioner's imprecise reading of a document cannot be the basis for a litigable contention. *See Ga. Inst. of Tech.* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 300 (1995).

Furthermore, "an expert opinion that merely states a conclusion (*e.g.*, the application is 'deficient,' 'inadequate,' or 'wrong') without providing *a reasoned basis or explanation* for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion" alleged to provide a basis for the contention. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (emphasis added) (quoting *Private Fuel Storage*, LBP-98-7, 47 NRC at 181). Conclusory statements cannot

provide "sufficient" support for a contention, simply because they are proffered by an alleged expert. *See USEC*, CLI-06-10, 63 NRC at 472. In summary, a contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits', but instead only 'bare assertions and speculation.'" *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *Gen. Pub. Utils. Nuclear, Inc*. (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000)).

f. Petitioner Must Demonstrate that the Contention Raises a Genuine Dispute With Respect to a Material Issue of Law or Fact

With regard to the final requirement, that a petitioner "provide sufficient information to show . . . a genuine dispute . . . with the applicant . . . on a material issue of law or fact," 10 C.F.R. § 2.309(f)(1)(vi), the Commission has stated that the petitioner must "read the pertinent portions of the license application, . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant. Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Dominion Nuclear Conn., Inc.*, CLI-01-24, 54 NRC at 358.

In claiming that the Application fails to address adequately a material issue, a petitioner must "explain why the application is deficient." Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Ariz. Pub. Serv. Co.*, CLI-91-12, 34 NRC at 156. An allegation that some aspect of a license application is "inadequate" or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. *See Fla. Power & Light Co.* (Turkey Point Plant, Unit Nos. 3 and 4), LBP-90-16, 31 NRC 509, 521, 521 n.12 (1990). Put another way, a contention that does not *directly controvert a position taken by the applicant in the application* is subject to dismissal. *See Tex. Utils. Elec. Co.*

(Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992) (emphasis added). For example, if a petitioner submits a contention of omission, but the allegedly missing information is, in fact, contained in the license application, then the contention does not raise a genuine dispute.

4. Environmental Contentions Addressing DOE's Final Environmental Impact Statement and its Supplements Must Also Meet the Requirements of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326

In its Hearing Notice, the Commission reaffirmed that environmental contentions are subject to substantially heightened admissibility standards.[12] In addition to the NRC's contention admissibility requirements in 10 C.F.R. § 2.309(f), environmental contentions must also meet the requirements of 10 C.F.R. § 51.109 and the requirements of 10 C.F.R. § 2.326. These two sections impose the following admissibility standards on environmental contentions:

1. Contentions must allege that it is not practicable to adopt the DOE EIS for one of two reasons:

   "(1)(i) The action proposed to be taken by the Commission differs from the action proposed in the license application submitted by [DOE]; and (ii) the difference may significantly affect the quality of the human environment;[13] or

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[12] In February of 2002, DOE issued the *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250F, February 2002) (2002 FEIS). On April 8, 2004, DOE announced in a Record of Decision (2004 ROD) the selection of the mostly rail alternative analyzed in the 2002 FEIS for transporting spent nuclear fuel and high-level radioactive waste nationally and within Nevada. 69 Fed. Reg. 18,557. DOE also announced in the 2004 ROD that it had selected the Caliente rail corridor in which to examine possible alignments for construction of a rail line in Nevada. In July 2008, DOE issued the *Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250F-S1) (Repository SEIS), the *Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada – Nevada Rail Transportation Corridor* (DOE/EIS-0250F-S2) (Nevada Rail Corridor SEIS), and the *Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0369) (Rail Alignment EIS). On October 10, 2008, DOE issued a Record of Decision (2008 ROD) announcing its decision to construct and operate a railroad along a rail alignment within the Caliente corridor. 73 Fed. Reg. 60,247.

[13] Because the action proposed to be taken by the NRC does not differ from the action proposed in DOE's application, this first factor has no relevance to this proceeding and will not be discussed further.

(2) Significant and substantial new information or new considerations render such [EIS] inadequate." 10 C.F.R. § 51.109(c).

2. The contention must address a "significant" environmental issue. 10 C.F.R. § 2.326(a)(2).

3. The contention must demonstrate that, if true, "a materially different result would be or would have been likely . . . ." 10 C.F.R. § 2.326(a)(3).

4. The contention must be supported by affidavits that set forth the factual and/or technical basis for the movant's claims and must be given by competent individuals with knowledge of the facts or by experts in the appropriate disciplines. 10 C.F.R. § 2.326(b).[14]

These additional admissibility standards are discussed in greater detail below.

a. The 10 C.F.R. § 51.109 Criteria

Given the *sui generis* nature of this proceeding, neither the Commission nor its boards have applied § 51.109 in the context of an adjudication. Nevertheless, existing Commission decisions and federal caselaw under NEPA provide guidance with respect to how the criteria under § 51.109 should be applied in this proceeding.

First, the Commission has made clear that its adjudicatory boards should not "automatically assume" that a proffered environmental contention—though cognizable as a "new consideration" under the D.C. Circuit's decision in *NEI*—contains "significant and substantial information" that, if true, would render the DOE EIS and its supplements "inadequate" under NEPA. Letter from Bradley W. Jones, Esq., Assistant Gen. Counsel, U.S. Nuclear Regulatory Comm'n, to Martin G. Malsch, Esq., "Request By Nevada For Reconsideration and Clarification of Notice of Denial," March 20, 2008, *available at* ADAMS Accession No. ML080810175 (Jones Letter). This approach is consistent with well-established NEPA principles, as applied by the federal courts, under which reviewing courts have held that the identification of a deficiency

[14] In addition, evidence in the affidavits must meet NRC admissibility standards and each criteria in 10 C.F.R. § 2.326 must be addressed separately.

in an EIS does not necessarily render that EIS "inadequate." For example, the D.C. Circuit so held in denying Nevada's challenge to the transportation-related portions of DOE's 2002 FEIS. *Nevada v. Dep't of Energy*, 457 F.3d 78, 93 (D.C. Cir. 2006) (rejecting alleged inadequacies in the FEIS relating to environmental impacts on cultural resources, floodplains and archaeological and historic impacts and stating "we do not think that the inadequacies to which Nevada points make the FEIS inadequate" or render DOE's selection of the Caliente Corridor "arbitrary and capricious."). The D.C. Circuit in this prior proceeding emphasized that courts "will not 'flyspeck' an agency's environmental analysis, looking for any deficiency no matter how minor." *Id.* (citing *Fuel Safe Wash. v. Fed. Energy Regulatory Comm'n*, 389 F.3d 1313, 1323 (10th Cir. 2004); *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 508 (9th Cir. 1988)).

The Commission, for its part, has indicated that this same standard applies in its licensing proceedings. As the Commission explained:

> NEPA's twin goals are to inform the agency and the public about the environmental effects of a project. At NRC licensing hearings, petitioners may raise contentions seeking correction of *significant inaccuracies and omissions* in the [applicant's environmental report ("ER") or agency's EIS]. Our boards do not sit to 'flyspeck" environmental documents or to add details or nuances. If the ER (or EIS) on its face "comes to grips with all important considerations" nothing more need be done.[15]

Sys. Energy Res., Inc. (Early Site Permit for Grand Gulf Site), CLI-05-4, 61 NRC 10, 13 (2005) (quoting *Hydro Res., Inc*. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001)) (emphasis added). A petitioner's claim must "suggest *significant environmental*

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[15] *See also Duke Energy Corp.*, (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003) ("NRC adjudicatory hearings are not EIS editing sessions. Our busy boards do not sit to parse and fine-tune EISs."). The Commission's admonition against the "flyspecking" and "fine-tuning" of EISs is particularly apt here, given that DOE has "primary responsibility" for consideration of environmental matters under the NWPA. Final Rule, NEPA Review Procedures for Geologic Repositories for High-Level Waste, 54 Fed. Reg. 27,864, 27,865 (July 3, 1989) (codified at 10 C.F.R. § 51.109). In contrast, under the NWPA, the NRC's NEPA-related responsibility in this proceeding is limited to determining whether adoption of DOE's EIS, as supplemented, is "practicable." *Id.*

oversights that warrant further inquiry at an evidentiary hearing." *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 811 (2005) (emphasis added). Thus, as the D.C. Circuit recognized in *Nuclear Energy Inst., Inc. v. Envtl. Protection Agency*, there must be significant "substantive defects" in the FEIS. 373 F.3d 1251, 1314 (D.C. Cir. 2004) (*NEI*).

Under NEPA, an EIS is not inadequate merely because a reviewing court or other adjudicatory tribunal might have reached a different conclusion. As the U.S. Supreme Court has explained, "[n]either the statute nor its legislative history contemplates that a court should substitute its judgment for that of the agency as to the environmental consequences of its actions." *Kleppe v. Sierra Club,* 427 U.S. 390, 410 n.21 (1976). The NRC has indicated that it would adhere to this same tenet in deciding whether to adopt DOE's EIS. Specifically, in promulgating 10 C.F.R. § 51.109, the NRC stated that "the adoption of the [DOE] statement does not necessarily mean that NRC would independently have arrived at the same conclusions on matters of fact or policy." Proposed Rule, NEPA Review Procedures for Geologic Repositories for High-Level Waste, 53 Fed. Reg. 16,131, 16,142 (May 5, 1988). Thus, in accordance with 10 C.F.R. § 51.109(d), insofar as the presiding officer determines that NRC adoption of DOE's EIS is "practicable" under § 51.109(c), "such adoption shall be deemed to satisfy all responsibilities of the Commission under NEPA and no further consideration under NEPA or this subpart shall be required."

In this proceeding, DOE submits that boards should apply § 51.109 consistent with the above referenced well established NEPA caselaw and decisions of the Commission.

b. The 10 C.F.R. § 2.326 Criteria and Procedures

Section 51.109(a)(2) directs the presiding officer, "to the extent possible," to use the "criteria and procedures that are followed in ruling on motions to reopen under § 2.326." In its

Hearing Notice, the Commission reiterated that a presiding officer should, to the extent possible, apply the reopening procedures and standards set forth in § 2.326. *See* Hearing Notice, 73 Fed. Reg. at 63,031.

By explicitly directing presiding officers to use the criteria and procedures contained in § 2.326, the Commission reaffirmed its longstanding intent to avoid, in accordance with the NWPA, "the wide-ranging independent examination of environmental concerns that is customary in NRC licensing proceedings." Proposed Rule, NEPA Review Procedures for Geologic Repositories for High-Level Waste, 53 Fed. Reg. at 16,136; *see also* NEPA Review Procedures for Geologic Repositories for High-Level Waste, Final Rule, 54 Fed. Reg. at 27,865 ("[W]e believe it to be a fair reading of Congressional intent that NRC can adequately exercise its NEPA responsibility with respect to a repository by relying upon DOE's environmental impact statement."). Specifically, the Commission has noted that the test for reopening a closed record—the same test to be applied by the Board in ruling on the admissibility of environmental contentions in this proceeding—is a "stiff test" that imposes a "strict" burden. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 22, 25 (2006); *see also Fla. Power & Light Co.* (Turkey Point Plant, Units 3 and 4), LBP-87-21, 25 NRC 958, 963-64 (1987) (stating that "a party seeking to reopen the record has a 'heavy burden' to bear") (quoting *Ka. Gas and Elec. Co.* (Wolf Creek Station, Unit No. 1), ALAB-462, 7 NRC 320, 338 (1978)). Parties seeking to reopen a closed record must raise a "significant" safety or environmental issue and demonstrate that "a materially different result [is] 'likely' as a result of the new evidence." *Private Fuel Storage*, CLI-06-3, 63 NRC at 25. In applying this test, the Commission has further noted that "[n]ew information is not enough, *ipso facto*, to reopen a closed hearing record," and that "the information must be significant and plausible enough to

require reasonable minds to inquire further." *Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-05-12, 61 NRC 345, 350 (2005).

The Commission has further noted that the supporting material required by § 2.326(b) "must be set forth with a degree of particularity *in excess of* the basis and specificity requirements contained in 10 C.F.R. [§ 2.309] for admissible contentions. Such supporting information must be more than mere allegations; it must be tantamount to evidence." *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-89-1, 29 NRC 89, 93 (1989) (quoting *Pacific Gas and Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 NRC 1361, 1366 (1984), *aff'd sub nom. San Luis Obispo Mothers for Peace v. U.S. Nuclear Regulatory Comm'n*, 751 F.2d 1287 (D.C. Cir. 1984), *aff'd on reh'g en banc*, 789 F.2d 26 (1986), *cert. denied*, 479 U.S. 923 (1986)). An intervenor's mere "belief" is insufficient to satisfy § 2.326(b). *Fla. Power & Light Co.*, LBP-87-21, 25 NRC at 963.

In short, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously—*i.e.*, to reject out-of-hand [] motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989) (citing *La. Power & Light Co.* (Waterford Steam Electric, Unit 3), CLI-86-1, 23 NRC 1 (1986); *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), CLI-86-7, 23 NRC 233 (1986), *aff'd sub nom. Ohio v. U.S. Nuclear Regulatory Comm'n*, 814 F.2d 258 (6th Cir. 1987)).

In the *Private Fuel Storage* decision (CLI-06-3) discussed above, the Commission applied the § 2.326 standard in ruling on a motion to reopen the record (after the Commission had rendered its final adjudicatory decision and authorized license issuance) to litigate a proposed environmental contention. The Commission's ruling is illustrative and underscores the

heavy burden imposed by § 2.326.[16] For example, the Commission emphasized "a high threshold" for reopening a record as established by "longstanding NRC regulations and precedent." *Private Fuel Storage*, CLI-06-3, 63 NRC at 22; *see also id.* at 25 (stating that the NRC does "not lightly reopen [its] adjudicatory proceedings"). The Commission found that the intervenor had failed to meet substantive and evidentiary requirements of § 2.326, stating that "we cannot say on the current record that a materially different result in our licensing proceeding is so 'likely' that we must reopen the adjudicatory proceeding for additional hearings and findings." *Id.* at 26-27. Consequently, the Commission rejected the intervenor's request that the entire project be placed on hold.

In the context of the Yucca Mountain proceeding, the requirement that the petitioner must demonstrate that a materially different outcome would likely result means that the contention, if true, would severely impact the EIS such that it could not be adopted unless formally supplemented by NRC or DOE.

In summary, given the considerably heightened admissibility standards applicable here, DOE submits that in this proceeding a presiding officer should admit *environmental* contentions in this proceeding only under very limited circumstances. Under 10 C.F.R. §§ 51.109(c) and 2.326, an environmental contention must present *evidence* concerning a "significant" environmental issue. Under those same provisions, that information must be so "substantial" as to demonstrate that the alleged inadequacy in the DOE EISs is "likely" to dictate a "materially different result." As the Commission explained in *Private Fuel Storage*, this means that any "new information" proffered by a petitioner must present a "*seriously* different picture of the

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[16] In recently denying a motion to reopen the record, the Commission emphasized the "deliberately heavy" burden associated with § 2.326. *See AmerGen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC __ (slip op. at 13-14) (Nov. 6, 2008) ("The burden of satisfying the reopening requirements is a heavy one, and proponents of a reopening motion bear the burden of meeting all of [these] requirements.") (internal quotation marks and citations omitted).

environmental landscape," such that it would "be likely to change the outcome of the proceeding or affect the licensing decision in a material way." CLI-06-3, 63 NRC at 19, 28.

5. Contention Subjects That Are Outside the Scope of, or Immaterial to the NRC's Required Findings in, the Yucca Mountain Licensing Proceeding

As discussed above, a petitioner seeking admission of a proposed contention must, among meeting other requirements, demonstrate that the issue raised in the contention is within the scope of the proceeding and material to the findings that the NRC must make to support issuance of a repository construction authorization to DOE. A non-exclusive discussion of certain categories of contentions that clearly fall outside the proper scope of this proceeding and/or lack a material nexus to the Staff's required findings is provided below.

a. Contentions Relating to Transportation of Spent Nuclear Fuel (SNF) and High Level Radioactive Waste (HLW) Are Beyond The Scope of This Proceeding

(1) The NRC has no regulatory authority over transportation of SNF or HLW.

Under the AEA and the Energy Reorganization Act (ERA), NRC does not have regulatory authority over DOE's facilities and activities except as specifically provided by statute. 42 U.S.C. § 5851. Section 202 of the ERA provides the NRC with licensing and related regulatory authority over certain specific facilities of the DOE, including facilities for the disposal of SNF and HLW. 42 U.S.C. § 5842. However, neither section 202 of the ERA, nor the NWPA, nor any other statute provides NRC with authority over the transportation by DOE of SNF and HLW.

DOE's transportation of SNF or HLW therefore is not subject to NRC regulation and the NRC has recognized the limited scope of its regulatory authority. For example, in its discussion of proposed amendments to its regulations regarding GROA Security and Material Control and Accounting Requirements, the NRC explained that the rulemaking did not cover transportation

of HLW to the GROA because "the NRC's regulatory authority is limited to the operations at a GROA." GROA Security and Material Control and Accounting Requirements, 72 Fed. Reg. 72,522, 72,527 (Dec. 20, 2007). DOE is required by the NWPA to use NRC certified casks for shipment of SNF or HLW to the repository.[17] 42 U.S.C. § 10175. That certification, however, is separate and distinct from the repository licensing action being undertaken by the NRC under Part 63. The requirements for such a certification are set forth not in Part 63, but instead in 10 C.F.R. Part 71.

(2) Contentions challenging DOE's Records of Decision concerning transportation of materials to Yucca Mountain are outside the scope of this proceeding and are within the original and exclusive jurisdiction of the Courts of Appeals.

In addition to the NRC's lack of regulatory authority over transportation of SNF and HLW, under the NWPA, any challenges to DOE transportation decisions, to the extent reviewable, are within the original and exclusive jurisdiction of the federal courts of appeals. In particular, section 119 of the NWPA expressly provides that the United States Courts of Appeals shall have original and exclusive jurisdiction over any civil action for review of any final decision or action of the Secretary of Energy as well as of any civil action alleging the failure of the Secretary "to make any decision, or take any action, required under this subtitle." 42 U.S.C.

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[17] Similarly, in a May 10, 2002, response to a March 22, 2002, letter from Senator Richard Durbin, asking what role the NRC would play regarding transportation of spent fuel to Yucca Mountain, NRC Chairman Richard Meserve stated:

> If DOE takes custody of the spent fuel at the licensee's site, *DOE regulations would control the actual spent fuel shipment*. Under such circumstances, the NRC's primary role in transportation of spent fuel to a repository would be certification of the packages used for transport.
>
> * * *
>
> As stated previously, if DOE takes custody to the spent fuel at the reactor site the only involvement NRC will have in the transport will be the certification of the transport cask.

Letter from Richard Meserve, former Chairman of the NRC, to Sen. Richard Durbin at 2 (May 10, 2002), *available at* ADAMS Accession No. ML 21060662. DOE's plan is to take custody of the spent fuel at the reactor site.

§ 10139(a)(1)(C). Any such action must be initiated through a petition for review filed with a court of appeals within 180 days of the decision or action or failure to act involved. 42 U.S.C. § 10139(c).

Relevant to this proceeding, on October 10, 2008, DOE issued a Record of Decision (ROD) documenting DOE's decision to construct a railroad in the State of Nevada in an alignment within the Caliente corridor along various segments together with various support facilities as detailed in the ROD. As discussed below, any challenge to the ROD accordingly must be initiated through a petition for review to a court of appeals—not through the NRC contention process.

In *Nevada v. DOE* and *NEI v. EPA*, the D.C. Circuit anticipated that DOE would in the future be issuing transportation related decisions. For example, in *NEI*, 373 F.3d at 1312, the Court stated:

> Section 114(f)(4) of the NWPA provides, in relevant part, that the DOE's FEIS "shall, to the extent practicable, be adopted by [NRC] in connection with the issuance by [NRC] of a construction authorization and license for such repository." 42 U.S.C. § 10134(f)(4). To the extent NRC adopts the FEIS, NRC's responsibilities under the National Environmental Policy Act shall be deemed satisfied and "no further consideration shall be required." *Id*. *In addition, DOE is expected to use the FEIS to support one or more future decisions related to Yucca Mountain, including the selection of an alternative for transporting waste to the site*.

Emphasis added.

On April 8, 2004, DOE issued a ROD addressing transportation matters. Subsequently, following issuance of DOE's April 8, 2004 ROD, Nevada filed a petition for review with the D.C. Circuit pursuant to section 119 of the NWPA seeking review of the ROD and the transportation-related portions of the 2002 FEIS on which it was based. The ROD announced

DOE's selection, both nationally and in Nevada, of the mostly rail scenario analyzed in the 2002 FEIS as the primary means of transporting SNF and HLW to the repository. The ROD also selected the Caliente rail corridor from several corridors considered in the 2002 FEIS as the corridor in which to study possible alignments for a rail line connecting the Yucca Mountain site to an existing rail line in Nevada. *See* ROD on Mode of Transportation and Nevada Fuel and High-Level Radiation Waste at Yucca Mountain, Nye County, NV, 69 Fed. Reg. 18,557 (Apr. 8, 2004). Nevada claimed that "in selecting a national transportation mode and Nevada rail corridor for the movement of waste to Yucca, DOE violated NEPA and NEPA implementing regulations" and acted in an arbitrary and capricious manner and contrary to law. Petitioner's Final Opening Brief at 2-4.

The D.C. Circuit took jurisdiction of the State's petition for review and rejected the State's claims on their merits (with the exception of certain contingency plans which the court held were not ripe for review).[18] The Court held, among other things, that DOE had taken the "requisite hard look" at the potential rail corridor environmental impacts and that "DOE's analysis of the environmental impacts of rail corridor selection in its FEIS is adequate." *Nevada*, 457 F.3d at 89-93. The D.C. Circuit also held that "[w]e summarily deny any claims not specifically addressed in this opinion," which included all the issues raised in the State's briefs. *Id.* at 94 n.10.

This decision is res judicata as to Nevada and the preclusive effect of this decision applies not only to those NEPA claims decided by the court of appeals but also to those which could have been raised. *W. Radio Servs. Co. v. Glickman,* 123 F. 3d 1189 (9th Cir. 1997) (concluding that "any cognizable claims should have been raised in *Western Radio I*, and are

[18] The Court of Appeals noted that "[a]lthough much of the FEIS concentrated on the Yucca site, it also analyzed alternatives for, and the 'potential environmental consequences' of, transporting nuclear waste from the many production sources throughout the country to the repository at Yucca." *Nevada*, 457 F.3d at 82.

thus barred by res judicata"). Of course, any person who failed to file a challenge within 180 days would be time barred pursuant to NWPA section 119(c) among other defenses. Further, as the Commission has recognized, a person does not have the option of postponing judicial review under section 119 of the NWPA, by instead trying to raise transportation-related environmental issues before the NRC. In particular, the NRC rejected this approach when it was raised in comments to the proposed 10 C.F.R. § 51.109 in 1989. In their comments to the Commission, certain environmental organizations stated that "affected parties may decide for reasons of litigative strategy" to raise environmental issues "in NRC licensing proceedings rather than by going to court." Final Rule, NEPA Review Procedures for Geologic Repositories for High-Level Radioactive Waste, 54 Fed. Reg. at 27,866. The Commission responded by stating that such a "unilateral decision" would "circumvent the clear policy of the NWPA…." *Id*.

The same path of review followed in 2004 is appropriate with respect to challenges to DOE's transportation decisions set forth in the Department's October 10, 2008 ROD. The fact that the NRC construction authorization proceeding, which is limited to activities at the GROA, now has commenced does not alter the requirement under section 119 of the NWPA that final DOE decisions must be appealed to the courts of appeals whose jurisdiction is "original and exclusive" over such matters. 42 U.S.C. § 10139(a)(1).

In summary, challenges to the April 2004 ROD, and the transportation related portions of the 2002 FEIS on which it was based, are no longer subject to review in any forum, both as a result of the expiration of the 180 day period to challenge that ROD set forth in section 119 of the NWPA and as a result of the D.C. Circuit's 2006 decision. Any challenges to DOE's transportation decisions set forth in the October 10, 2008 ROD also are not appropriately a part

of this proceeding; such challenges may be pursued only through a petition for review to a federal court of appeals.

(3) Consideration by NRC of transportation impacts under NEPA is limited.

Under section 114 of the NWPA, the Commission must adopt DOE's FEIS to the extent practicable. In considering the environmental impacts of transportation decisions made by DOE, the role of the NRC here is similar to that adopted by the Commission in *Pub. Serv. Co. of N.H.*, (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 25 (1978), and affirmed by the court of appeals in *New England Coalition on Nuclear Pollution v. U.S. Nuclear Regulatory Comm'n*, 582 F.2d 87 (1st Cir. 1978). In that case, the petitioners argued that NEPA did not permit the NRC to adopt EPA findings made under the Federal Water Pollution Control Act (FWPCA) without an independent inquiry of the effects a proposed nuclear power plant would have on the aquatic environment. As the Commission noted, Congress had amended the FWPCA to avoid duplicative reviews, and left to the EPA the decision as to the water pollution control criteria to which a nuclear power plant's cooling system would be held. The NRC was not free to ignore considerations of aquatic impact; "it would have to consider them, but only as part of its overall 'balancing judgment' on whether it is in the public interest to grant the requested permit." *Pub. Serv. Co. of N.H.*, CLI-78-1, 7 NRC at 25. The NRC, further, could not "go behind" the EPA's determination. *Id*. at 26.

Similarly, in this proceeding, the NRC should decide whether to issue construction authorization for the repository given the transportation impacts as determined by DOE (and potentially as reviewed by the court of appeals). Accordingly, contentions challenging the accuracy or adequacy of DOE's NEPA analysis of the impacts of transporting SNF or HLW are not proper subjects for contentions in this proceeding.

B. Co-Sponsorship of Contentions and Incorporation by Reference

Pursuant to 10 C.F.R. § 2.309(f)(3), contentions may be sponsored by two or more petitioners. Specifically, 10 C.F.R. § 2.309(f)(3) states:

> If two or more requestors/petitioners seek to co-sponsor a contention, the requestors/petitioners shall jointly designate a representative who shall have the authority to act for the requestors/petitioners with respect to that contention. If a requestor/petitioner seeks to adopt the contention of another sponsoring requestor/petitioner, the requestor/petitioner who seeks to adopt the contention must either agree that the sponsoring requestor/petitioner shall act as the representative with respect to that contention, or jointly designate with the sponsoring requestor/petitioner a representative who shall have the authority to act for the requestors/petitioners with respect to that contention.

While the regulation acknowledges that two or more petitioners may co-sponsor a contention, it does not address whether a petitioner who seeks co-sponsorship may be granted party status merely by incorporating contentions only by reference to another party's pleading.

The Commission, however, has addressed this issue. In a license transfer proceeding involving Indian Point, Units 1 and 2, two intervenors (Town of Cortland and Citizens Awareness Network) sought to adopt each other's contentions. *See Consol. Edison Co.* (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 131-33 (2001). The Commission held that where both petitioners have independently met the requirements to participate in the proceeding, the Board may provisionally allow petitioners to adopt each other's issues early in the proceeding. *Id*. at 132. If the primary sponsor of a contention withdraws from the proceeding, then the remaining petitioner must demonstrate that it has the "independent ability to litigate [the] issue." *Id*. If the petitioner cannot make such a showing, then the issue must be dismissed prior to hearing. *Id.*

Incorporation by reference should be denied to parties who merely establish standing and then attempt to incorporate issues of other petitioners. *Id*. at 133. Incorporation by reference

also would be improper in cases where a petitioner has not independently established compliance with requirements for admission in its own pleadings by submitting at least one admissible contention of its own. *Id*. As the Commission indicated "[o]ur contention-pleading rules are designed, in part, 'to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.'" *Id*. (citing *Duke Energy Corp.*, CLI-99-11, 49 NRC at 334).

C. DOE's Answer Regarding the Admissibility of Petitioner's Proposed Contentions

1. CONTENTION NO. 1 INY-SAFETY-1 - FAILURE TO ADEQUATELY DESCRIBE AND ANALYZE THE FLOW PATH IN THE LOWER CARBONATE AQUIFER THROUGH WHICH CONTAMINANTS MAY MIGRATE AND ADVERSELY IMPACT AREAS WITHIN THE COUNTY OF INYO

The applicant (or "DOE") failed to include in the Yucca Mountain Repository License Application ("LA") and Safety Analysis Report ("SAR") a description and analysis of the flow path in the lower carbonate aquifer through which contaminants can migrate from the proposed repository site to the biosphere including to areas within the County of Inyo.

RESPONSE

Inyo County alleges that DOE "failed to include … a description and analysis of the flow path in the lower carbonate aquifer through which contaminants can migrate from the proposed repository site to the biosphere including to areas within the County of Inyo." Petition at 3. As discussed below, Inyo County's argument is not material, lacks appropriate expert support, and does not raise a genuine dispute.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

In its attempt to demonstrate that this contention is material to the findings that the NRC must make in this proceeding, this section of the contention identifies various regulations.[19] 10 C.F.R. § 2.309(f)(1)(iv) requires a showing by a petitioner that "the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding ...," not merely a citation of the relevant regulations. In this regard, a contention is material only if its resolution would make a difference in the outcome of the proceeding. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1 and 2, and 3), CLI-99-11, 49 NRC 328, 333-34 (1999).

While the Advisory PAPO Board directed the potential parties to provide a "citation to a statute or regulation that, explicitly or implicitly, has not been satisfied," (*U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters, Advisory PAPO Board), LBP-08-10, 67 NRC __ (slip op. at 7) (June 20, 2008) (Case Management Order)), this direction cannot be read to dispense with the well-recognized requirement that resolution of the contention would make a difference in the outcome of the proceeding, particularly since the Case Management Order focused exclusively on "format" and "procedural matters." Case Management Order at 3.[20]

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[19] Many of the citations to various regulations appear to be incorrect, *see e.g.*, "10 CFR 31(a)(3)(i)"; "10 CFR 31(a)(1) and 10 31 (a)(2)"; "10 CFR 31(a)(2)." Petition at 4. DOE assumes Inyo County is referring to Part 63.

[20] This contention provides a multi-faceted claim, alleging that DOE did not analyze: the flow path for the lower carbonate aquifer (Petition at 3); the possibility of groundwater pumping eliminating the upward gradient and contaminants entering the lower carbonate aquifer (Petition at 7); a drawdown in the Amargosa Valley (Petition at 8); or how long it may take contaminants to reach the lower carbonate aquifer (Petition at 12). Furthermore, on countless occasions Inyo County identifies a panoply of sections in the Application, SAR, Repository SEIS, and Rail Alignment SEIS that are in dispute. *See, e.g.*, Petition at 8-9. In fact, Inyo County even tacitly admits their non-compliance with the Case Management Order by making the following, albeit inconsistent, statement, "[t]he *specific* portion of the LA that is being challenged includes LA, Vol. 14, § 2.3.9.2.4.2, and in the Final EIS, Volume I, Chapter 5; the Final SEIS, Volume I, Chapter 3, § 3.1.4.2, Vol. I,

Inyo County asserts that DOE did not adequately assess the flow path in the lower carbonate aquifer. Petition at 3, 15. However, it fails to demonstrate that this position is material to any finding the NRC must make to authorize construction of the repository. More specifically, Inyo County fails to demonstrate that resolution of the contention would make a difference in the proceeding. As stated in Section IV.A.3, *supra*, Part 63 permits DOE to use probabilistic analyses to calculate potential postclosure radiation doses, 10 C.F.R. § 63.102(j), and to report those doses as mean doses, 10 C.F.R. § 63.303. Thus, contentions failing to allege an increase in the mean dose above the regulatory limit, a violation of some other specific requirement, or some significant link between the claimed deficiency and protection of the health and safety of the public or environment are immaterial and inadmissible. *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Unites 2 and 3), LBP-04-15, 60 NRC 81, 89 (2004) *aff'd*, CLI-04-6, 60 NRC 631.

Accordingly, this contention fails to raise an issue that is material to the findings that the NRC must make in this proceeding, and, thus, must be dismissed.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

This contention does not reference any supporting expert opinion. Of the three affidavits attached to the Petition, only two relate to this contention (Petition, Attachments 1 (Dr. John Bredehoeft) and 2 (Mr. Matthew Gaffney)). Dr. Bredehoeft merely adopts the discussion in paragraph 5 of the contention and the second affidavit is never referenced in the body of this contention. Petition, Attachment 1, at 2 (Dr. John Bredehoeft). Further, Mr. Gaffney does not

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section 5.4, and Vol. III, Chapter 1, subchapter 1.7.4." Petition at 15 (emphasis added). This contention runs afoul of the Case Management Order governing this proceeding, which requires that petitioners raise a "narrow, single-issue [contention]." *See U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 6). In issuing the Case Management Order, the Advisory PAPO Board stated that "contentions should be sufficiently specific as to define the relevant issues for eventual rulings on the merits, and not require the parties or licensing boards to devote substantial resources to narrow or to clarify them." *Id*.

provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Attachment 2 at 1 (Gaffney). Mr. Gaffney does not explain the nature of his "environmental planning experience" or where he obtained that experience. Yet, it was Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Nevertheless, these affidavits do not provide an adequate statement of alleged facts or expert opinion. As discussed in more detail in Section IV.A.3 of this Answer, such affidavits are not sufficient to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(v).

Inyo County's principal assertion is that DOE "doesn't assess the possibility that a continuation of current levels of local groundwater pumping and/or additional regional groundwater pumping that is foreseeable in the future could reduce or eliminate the upward gradient….[and] potentially enter the lower carbonate aquifer…." Petition at 7. These statements, which appear in paragraph 5 of the contention, are adopted by Dr. Bredehoeft. Petition, Attachment 1, at 2. There is no evidence in the Petition as to how Inyo County arrived at the possibility of the upward gradient being eliminated. Furthermore, in an attachment to Mr. Gaffney's affidavit he acknowledges that DOE considered the lower carbonate aquifer because Inyo County's scientific data supports DOE's conclusion that the upward gradient will prevent migration of radionuclides from the repository to the lower carbonate aquifer. *See* Attachment A (Gaffney) at 2.

Indeed, Dr. Bredehoeft stated, as a disclaimer in the report referenced in this contention, that he was "*making no assertions about the likelihood of contaminants migrating into the Carbonate Aquifer.*" Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, at 3 (LSN CAL 000000029) (emphasis in original). In the summary and conclusions section of this report, the authors reiterated that, "[w]e are in no way inferring that movement of contaminants from the repository through the Carbonate Aquifer is likely—only that it should be safeguarded from occurring." *Id*. at 18. These statements contradict the wholesale adoption of paragraph 5 thus making the contention inadmissible. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

Additionally, Dr. Bredehoeft's conclusions merely addressed the hypothetical question that "should contaminants get to the Carbonate Aquifer, how long will [it] take them to reach the biosphere." Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, at 3 (LSN CAL 000000029). Inyo County's references to his analysis on this subject fail to support admission of this contention. In order for the Board to address this topic they would have to assume without factual or technical support that the upward gradient will be eliminated and contaminants will enter the carbonate aquifer. A contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits', but instead only 'bare assertions and speculation.'" *Fansteel, Inc*. (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *Gen. Pub. Utils. Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000) (GPU)).

In an effort to support Inyo County's underlying position (*i.e.*, the Application did not include a description of the flow path for the lower carbonate aquifer) the Petition cites principally to two references that, as discussed above, admittedly do not even address this position. Petition at 3; *see* Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, at 3 (LSN CAL 000000029) and Bredehoeft, Fridrich and King, "Groundwater Flow Through the Funeral Mountains, Death Valley National Park, California," Hydrodynamics Group, LLC, 12th IHLRWM, Las Vegas, Nevada, September 7-11, 2008 (LSN CAL 000000030). Furthermore, Inyo County does not consistently cite particular paragraphs and/or pages for these references. Petition at 6, 7. Other facts in paragraph 5 of the contention similarly lack support. For example:

- Inyo County says that "the LA doesn't assess the possibility that a continuation of current levels of local groundwater pumping … that is foreseeable in the future could reduce or eliminate the upward gradient." Petition at 7. Inyo County provides no citation for this sentence, nor does it describe what the "current levels of groundwater pumping" are.

- Inyo County says that "[s]hould such groundwater pumping eliminate the upward gradient, contaminants from the repository could potentially enter the lower carbonate aquifer…." Petition at 7. Again, Inyo County fails to offer a citation for this proposition and never, here or elsewhere in the contention, describes *how* groundwater pumping could eliminate the upward gradient.

- Inyo County says "recent scientific work done by the County of Inyo indicates that contaminants entering the carbonate aquifer from the repository could migrate …." Petition at 7. While Inyo County references "recent scientific work" it offers no citation as to the specifics of the work completed or even who conducted the alleged analysis.

To that end, conclusory statements cannot provide "sufficient" support for a contention even if they are proffered by an alleged expert. *See USEC*, CLI-06-10, 63 NRC at 472. Additionally, Inyo County must identify specific portions of the documents on which it relies. *See Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), CLI-89-03, 29 NRC 234, 240-41

(1989). Consistent with this requirement, the Case Management Order directs petitioners to ensure that documentary references "be as specific as reasonably possible." *U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 7). For these reasons the contention must be dismissed.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

The Licensing Board also must dismiss this contention because it does not establish that a genuine dispute exists with DOE on a material issue of law or fact. This contention raises only an implausible hypothetical scenario in which pumping is allowed to occur at levels that would risk the reversal of the upward gradient. Inyo County alleges that *if* the upward gradient is eliminated under some uncertain level of future groundwater pumping, the gradient *might* no longer be a barrier to contaminants from the repository entering the lower carbonate aquifer. *See* Petition at 10. This allegation is based solely on the hypothetical and speculative possibility that: 1) the upward gradient *could be* reversed under some uncertain circumstance; 2) pumping would be allowed to occur at levels high enough to potentially contribute to such circumstance; and 3) if the upward gradient *were* reversed, it *might* no longer serve as a barrier to contaminants entering the lower carbonate aquifer. Inyo County offers no evidence to demonstrate that these scenarios are any more than remote and speculative possibilities, which DOE is not required to consider. *See Fansteel, Inc*., CLI-03-13, 58 NRC at 203.

These same type of 'if-then' statements were made in *Dominion Nuclear Conn.* (Millstone Nuclear Power Station), LBP-03-12, 58 NRC 75, 93-94 (2003), *aff'd*, CLI-03-14, 58 NRC 207. The Board rejected the contention for failing to raise a genuine dispute because the petitioner did not "state[] with any specificity *how* any increases [in levels of radiological

effluents] would occur." *Id*. (emphasis in original). Inyo County's assertion is similarly deficient of any analytical support and should be dismissed.

For these reasons, in addition to those addressed above, this contention must be rejected.

2. CONTENTION NO. 2 - INY-NEPA-1 FAILURE TO PROVIDE A COMPLETE AND ADEQUATE DISCUSSION OF THE NATURE AND EXTENT OF THE REPOSITORY'S DIRECT AND CUMULATIVE IMPACTS ON GROUNDWATER IN THE LOWER CARBONATE AQUIFER

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the direct and cumulative environmental impacts of the proposed repository on groundwater in the lower carbonate aquifer.

RESPONSE

In this contention, Inyo County alleges that DOE failed to adequately analyze the direct and cumulative environmental impacts of the proposed repository on groundwater in the lower carbonate aquifer. Petition at 16.

All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention, be admitted in this proceeding. Specifically, as set forth in Section IV.A.4, Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Inyo County's environmental contention must also be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that

these two criteria have been met, including a "specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.*, to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting affidavits. Of the three affidavits attached to the Petition, only two relate to this contention. *See* Gaffney Affidavit and Bredehoeft Affidavit. The affidavit of Mr. Gaffney does not refer to any particular contentions and is never referenced in this contention. Mr. Gaffney's affidavit concludes, without supporting evidence or explanation, that "The DOE's EIS and SEIS analysis are inadeuqate [sic] regarding effects of [sic] facility on groundwater in [sic] lower carbonate aquifer [sic]." Gaffney Affidavit at 2. Mr. Gaffney incorporates by reference comments that have previously been submitted by Inyo County to DOE. In the comments, however, Mr. Gaffney actually acknowledges that Inyo County's scientific data support DOE's conclusion that the upward gradient will prevent migration of radionuclides from the repository to the lower carbonate aquifer. Gaffney Affidavit, Attach. A at Supp. at 12.

There are a number of additional flaws in Mr. Gaffney's affidavit. First, Inyo County has not demonstrated that he is qualified to provide expert testimony regarding the aquifers in the region or any other subject. Mr. Gaffney does not provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Gaffney Affidavit at 1. Mr. Gaffney does not explain the nature of his

"environmental planning experience" or where he obtained that experience. Yet, it is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). In this case, Inyo County has failed to meet that burden and Mr. Gaffney's affidavit and this contention should be rejected.

The affidavit of Dr. Bredehoeft, the only expert relied upon by Inyo County for this contention, merely adopts the allegations contained in paragraph 5 of this contention. In his report cited in paragraph 5 of this contention, Dr. Bredehoeft expressly stated as a disclaimer that if proven true, he was "*making no assertions about the likelihood of contaminants migrating in the Carbonate Aquifer.*" Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, (LSN# CAL000000029 at 3) (emphasis in original). Dr. Bredehoeft's report reiterated in its summary and conclusion that, "[w]e are in no way inferring that movement of contaminants from the repository through the Carbonate Aquifer is likely – only that it should be safeguarded from occurring." *Id.* at 18. These statements demonstrate this is not a significant or material issue. Dr. Bredehoeft's report does *not* provide support for the allegations for which it is cited and clearly contradicts Dr. Bredehoeft's wholesale adoption of paragraph 5. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

In addition, neither paragraph 5 nor the expert affidavits attempt to demonstrate that a "materially different result would be or would have been likely" if the contention were proven to be true. This contention should therefore be rejected.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to the other positions taken by DOE, the Department expresses no legal objection based on this requirement.

b. Brief Explanation of Basis

Without prejudice to the other positions taken by DOE, the Department expresses no legal objection based on this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

For the reasons discussed in section d. below, this contention is outside the scope of this proceeding because it does not raise an issue that is material to the findings that the NRC must make. The contention should therefore be rejected.

d. Whether the Issue is Material to the Findings that the NRC Must Make

For the reasons discussed above, this contention does not raise an issue material to the findings NRC must make because an agency is not required to perform a "worst case" analysis or to consider "remote and speculative" possibilities.

In its NEPA documents, DOE analyzed the potential environmental impacts with respect to the lower carbonate aquifer. On the basis of studies performed by DOE and Inyo County based on the simple flow model, DOE determined that "Inyo County and DOE agree that the pathway simulated in the simple flow model is not a viable pathway for contaminants originating at the repository site as long as there is an upward gradient in the carbonate aquifer, which has been observed in boreholes in the Yucca Mountain vicinity." Repository SEIS, Vol. I at 3-34.

Inyo County's contention seeks to require DOE to consider a worst case scenario in which the upward gradient would be eliminated or reversed. An agency is not required, however, to perform a worst case analysis in order to satisfy NEPA's procedural requirements.

Robertson v. Methow Valley, 490 U.S. 332, 356 (1989). In eliminating the "worst case" requirement from its regulations, the Council on Environmental Quality pointed out that "one can always conjure up a worse 'worst case'" by adding more variables to a hypothetical event, 50 Fed. Reg. 32,234 (Aug. 8, 1985), and that "'worst case analysis' is an unproductive and ineffective method . . . one which can breed endless hypothesis and speculation," 51 Fed. Reg. 15,620 (Apr. 25, 1986). In *Methow Valley*, the Supreme Court held that the CEQ acted reasonably in eliminating the requirement that an agency conduct a worst-case analysis as part of a NEPA review and reversed a Court of Appeals' decision finding an EIS inadequate on the grounds that the agency had failed to conduct a worst case analysis. The Court noted that "CEQ regulations are entitled to substantial deference," and that the "worst case analysis" requirement had been abandoned for the well-considered reason that it had "distort[ed] the decision-making process by overemphasizing highly speculative harms." *Methow Valley*, 490 U.S. at 356; *Edwardsen v. U.S. Dep't of Interior*, 268 F.3d 781, 785 (9th Cir. 2001) ("[A]n EIS need not include a worst case analysis.").

Inyo County's contention relies on an implausible hypothetical scenario in which pumping is allowed to occur at levels that would risk the reversal of the upward gradient. Inyo County's allegation suggests that *if* the upward gradient is eliminated under some continuation of current levels of groundwater pumping, the gradient *might* no longer be a barrier to contaminants from the repository mixing with aquifer waters and migrating to the surface springs. *See* Petition at 17. This allegation is based solely on the hypothetical and speculative possibility that: 1) the upward gradient *could be* reversed under some uncertain circumstance; 2) pumping would be allowed to continue at levels to potentially contribute to such a scenario; and 3) if the upward

gradient *were* reversed, it *might* no longer serve as a barrier to contaminants entering the lower carbonate aquifer.

Further, Inyo Country's reliance on the report of Dr. Bredehoeft is misplaced. In fact, Dr. Bredehoeft's report expressly stated that it was "*making no assertions about the likelihood of contaminants migrating in the Carbonate Aquifer,*" and that it was "in no way inferring that movement of contaminants from the repository through the Carbonate Aquifer is likely." Bredehoeft and King 2008, (LSN # CAL000000029 at 3, 18) (emphasis in original). Inyo County offers no evidence to demonstrate that the scenario it alleges is any more than a "remote and speculative possibilit[y]," which DOE is not required to consider under NEPA. *Fla. Power & Light Co.* (Turkey Point Units 3 & 4), LBP-81-14, 13 NRC 677, 688 (1981); *Public Serv. Elec. & Gas Co.* (Hope Creek Generating Station), ALAB-518, 9 NRC 14, 17 (1979), citing *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 551 (1978); *Natural Res. Def. Council v. Morton*, 458 F.2d 827, 837-38 (D.C. Cir. 1972).

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R § 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

For the reasons discussed in section d. above, this contention does not raise a genuine dispute on a material issue of fact or law that DOE did not adequately address the nature and extent of the repository's cumulative impact on groundwater in the lower carbonate aquifer. The contention should therefore be rejected.

3. CONTENTION NO. 3 - INY-SAFETY-2 - FAILURE TO ADEQUATELY DESCRIBE AND ANALYZE THE IMPACT OF THE REPOSITORY IN COMBINATION WITH A CONTINUATION OF EXISTING LEVELS OF GROUNDWATER PUMPING ON THE POTENTIAL MIGRATION OF CONTAMINANTS FROM THE PROPOSED REPOSITORY

The applicant (or "DOE") failed to include in the Yucca Mountain Repository License Application ("LA") and Safety Analysis Report ("SAR") a description and analysis of the impact of a continuation of existing levels of groundwater pumping in the vicinity of the proposed repository on the flow path in the saturated zone through which contaminants can migrate from the proposed repository site to the biosphere including to areas within the County of Inyo.

RESPONSE

Inyo County alleges that DOE "failed to include … a description and analysis of the impact of a continuation of existing levels of groundwater pumping in the vicinity of the proposed repository on the flow path in the saturated zone through which contaminants can migrate from the proposed repository site to the biosphere including to areas within the County of Inyo." Petition at 26. As discussed below, Inyo County's argument is not material, lacks appropriate expert support, and does not raise a genuine dispute.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

In its attempt to demonstrate that this contention is material to the findings that the NRC must make in this proceeding, this section of the contention identifies various regulations.[21] 10 C.F.R. § 2.309(f)(1)(iv) requires the petitioner show that "the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding ...," not merely a citation of the relevant regulations. In this regard, a contention is material only if its resolution would make a difference in the outcome of the proceeding. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 NRC 328, 333-34 (1999).

While the Advisory PAPO Board directed the potential parties to provide a "citation to a statute or regulation that, explicitly or implicitly, has not been satisfied" (*U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters, Advisory PAPO Board), LBP-08-10, 67 NRC __ (slip op. at 7) (June 20, 2008) (Case Management Order)), this direction cannot be read to dispense with the well-recognized requirement that resolution of the contention would make a difference in the outcome of the proceeding, particularly since the Case Management Order focused exclusively on "format" and "procedural matters." Case Management Order at 3.[22]

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[21] Many of the citations to various regulations appear to be incorrect, *e.g.*, "10 CFR 31(a)(3)(i)"; "10 CFR 31(a)(1) and 10 31 (a)(2)"; "10 CFR 31(a)(2)." Petition at 27. DOE assumes Inyo County is referring to Part 63.

[22] This contention provides a multi-faceted claim, alleging that DOE did not analyze: the flow path in the saturated zone (Petition at 26); the flow path for contaminants to the biosphere (Petition at 26); the effects of groundwater pumping (Petition at 31); and the predicted drawdown in the Amargosa Valley nor the lower carbonate aquifer (Petition at 31). Furthermore, on countless occasions Inyo County identifies a panoply of sections in the Application, SAR, Repository SEIS, and 2002 FEIS" that are in dispute. *See, e.g.*, Petition at 28-30. In fact, Inyo County even tacitly admits their non-compliance with the Case Management Order by making the following, albeit inconsistent, statement, "[t]he *specific* portion of the LA that is being challenged includes LA, Vol. 14, § 2.3.9.2.4.2, and in the Final EIS, Volume I, Chapter 5; the Final SEIS, Volume I, Chapter 3, § 3.1.4.2, Vol. I, section 5.4, and Vol. III, Chapter 1, subchapter 1.7.4." Petition at 33 (emphasis

Inyo County asserts that DOE did not include a description of the effects of current levels of groundwater pumping. Petition at 26, 31. However, Inyo County fails to demonstrate that this position is material to any finding the NRC must make to authorize construction of the repository. More specifically, Inyo County fails to demonstrate that resolution of the contention would make a difference in the proceeding. As stated in Section IV.A.3, *supra*, Part 63 permits DOE to use probabilistic analyses to calculate potential pre and postclosure radiation doses, 10 C.F.R. § 63.102(j), and to report those doses as mean doses. 10 C.F.R. §§ 63.303. Thus, contentions failing to allege an increase in the mean doses above the regulatory limit, a violation of some other specific requirement, or some significant link between the claimed deficiency and protection of the health and safety of the public or environment are immaterial and inadmissible. *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 89 (2004) *aff'd*, CLI-04-6, 60 NRC 631.

Accordingly, this contention fails to raise an issue that is material to the findings that the NRC must make in this proceeding, and, thus, must be dismissed.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

This contention does not reference any supporting expert opinion. Of the three affidavits attached to the Petition, only two relate to this contention (Petition at Attachments 1 (Dr. John Bredehoeft) and 2 (Mr. Matthew Gaffney)). Dr. Bredehoeft merely adopts the discussion in paragraph 5 of the contention and the second affidavit is never referenced in the body of the contention. Petition, Attachment 1, at 2 (Dr. John Bredehoeft). Further, Mr. Gaffney does not

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added). This contention runs afoul of the Case Management Order governing this proceeding, which requires that petitioners raise a "narrow, single-issue [contention]." *See U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 6). In issuing the Case Management Order, the Advisory PAPO Board stated that "contentions should be sufficiently specific as to define the relevant issues for eventual rulings on the merits, and not require the parties or licensing boards to devote substantial resources to narrow or to clarify them." *Id*.

provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Attachment 2 at 1 (Gaffney). Mr. Gaffney does not explain the nature of his "environmental planning experience" or where he obtained that experience. Yet, it was Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Nevertheless, these affidavits do not provide an adequate statement of alleged facts or expert opinion. As discussed in more detail in Section IV.A.3 of this Answer, such affidavits are not sufficient to satisfy the requirements of § 2.309(f)(1)(v).

Inyo County's principal assertion is that "the LA does not assess the potential impact of a continuation of existing levels of groundwater pumping from the saturated zone on the potential migration of contaminants from the repository through the aquifer." Petition at 29. These statements, which appear in paragraph 5 of the contention, are adopted by Dr. Bredehoeft. Attachment 1, at 2 (Bredehoeft). Dr. Bredehoeft stated, as a disclaimer in the report referenced in this contention, that he was "*making no assertions about the likelihood of contaminants migrating into the Carbonate Aquifer.*" Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, at 3 (LSN CAL 000000029) (emphasis in original). In the summary and conclusions section of this report, the authors reiterated that, "[w]e are in no way inferring that movement of contaminants from the repository through the Carbonate Aquifer is likely—only that it should be safeguarded from occurring." *Id*. at 18. These statements contradict the

wholesale adoption of paragraph 5, thus making the contention inadmissible. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

Additionally, his conclusions merely addressed the hypothetical question that "should contaminants get to the Carbonate Aquifer, how long will [it] take them to reach the biosphere." Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, at 3 (LSN CAL 00000029). Inyo County's references to his analysis on this subject fail to support the admission of this contention. In order for the Board to address this topic they would have to assume without factual or technical support, that the upward gradient will be eliminated and contaminants will enter the carbonate aquifer. A contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits', but instead only 'bare assertions and speculation.'" *Fansteel, Inc*. (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *Gen. Pub. Utils. Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000) (GPU)).

Additionally, Inyo County does not consistently cite particular paragraphs and/or pages for these references or other expert facts in paragraph 5. For example:

- Inyo County says that "the saturated zone is a potential pathway for transport of radionuclides…." Petition at 29. Inyo County provides no citation for this sentence, nor does it describe what the saturated zone is or how it would act as a conduit for the transport of radionuclides.

- Inyo County says that "as shown by the County's recent report, such groundwater pumping has the potential to cause drawdown …." Petition at 31. Again, Inyo County fails to offer a citation for this County report and never describes *how* groundwater pumping could cause drawdown.

- Inyo County says "[i]f the upward gradient is eliminated, it will no longer be a barrier to contaminants from the repository entering the lower carbonate aquifer…." Petition at 31. Inyo County offers, yet again, no reference as to the basis for this conclusory statement.

Conclusory statements cannot provide "sufficient" support for a contention, even if they are proffered by an alleged expert. *See USEC, Inc.,* CLI-06-10, 63 NRC at 472. Additionally, Inyo County must identify specific portions of the documents on which it relies. *See Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), CLI-89-03, 29 NRC 234, 240-41 (1989). Consistent with this requirement, the Case Management Order directs petitioners to ensure that documentary references "be as specific as reasonably possible." *U.S. Dep't of Energy*, LBP-08-10, 67 NRC __ (slip op. at 7). For these reasons the contention must be dismissed.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

The Licensing Board also must dismiss this contention because it does not establish that a genuine dispute exists with DOE on a material issue of law or fact. This contention raises only an implausible hypothetical scenario in which pumping is allowed to occur at levels that would risk the reversal of the upward gradient. Inyo County alleges that *if* the upward gradient is eliminated under some continuation of current levels of groundwater pumping, the gradient *might* no longer be a barrier to contaminants from the repository mixing with aquifer waters and migrating to the surface springs. *See* Petition at 31. This allegation is based solely on the hypothetical and speculative possibility that: 1) the upward gradient *could be* reversed under some uncertain circumstance; 2) pumping would be allowed to continue at levels to potentially contribute to such a scenario; and 3) if the upward gradient *were* reversed, it *might* no longer serve as a barrier to contaminants entering the lower carbonate aquifer. There is no technical or factual basis for any of these "possibilities." Further, DOE is not required to consider the reasonably maximally exposed individual (REMI) beyond a distance 18 kilometers south of the repository. SAR at 2.1-1. These far-fetched possibilities must also account for the fact that any mixing would take place outside this distance where the amount of contamination, if any, would

be insignificant. Inyo County offers no evaluation or analysis to support that there would be any change in the analysis contained in the SAR.

Inyo County offers no evidence to demonstrate that these scenarios are any more than remote and speculative, which DOE is not required to consider. *See Fansteel, Inc*., CLI-03-13, 58 NRC at 203. These same type of 'if-then' statements were made in *Dominion Nuclear Conn.* (Millstone Nuclear Power Station), LBP-03-12, 58 NRC 75, 93-94 (2003), *aff'd*, CLI-03-14, 58 NRC 207. The Board rejected the contention for failing to raise a genuine dispute because the petitioner did not "state[] with any specificity *how* any increases [in levels of radiological effluents] would occur." *Id*. (emphasis in original). Inyo County's assertion is similarly deficient of any analytical support and should be dismissed.

For these reasons, in addition to those addressed above, this contention must be rejected.

4. CONTENTION NO. 4 - INY-NEPA-2 - FAILURE TO ADEQUATELY DESCRIBE AND ANALYZE THE CUMULATIVE IMPACT OF THE REPOSITORY IN COMBINATION WITH A CONTINUATION OF EXISTING LEVELS OF GROUNDWATER PUMPING ON THE POTENTIAL MIGRATION OF CONTAMINANTS FROM THE PROPOSED REPOSITORY

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain , Nye County Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the cumulative environmental impacts of a continuation of existing levels of groundwater pumping in the vicinity of the proposed repository on the flow path in the saturated zone through which contaminants can migrate from the proposed repository site to the biosphere including to areas within the County of Inyo.

RESPONSE

In this contention, Inyo County asserts that DOE's NEPA documents do not adequately assess the impact of a continuation of existing levels of groundwater pumping on the potential migration of contaminants.

All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention be admitted in this proceeding. Specifically, as set forth in Section IV.A.4,

Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Moreover, its environmental contention must be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including a "specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.*, to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting affidavits. Of the three affidavits attached to the Petition, only two relate to this contention. *See* Bredehoeft Affidavit and Gaffney Affidavit. The affidavit of Mr. Gaffney does not refer to any particular contentions and is never referenced in this contention. Mr. Gaffney's affidavit concludes, without supporting evidence or explanation, that "The DOE's EIS and SEIS analysis are inadeuqate [sic] regarding effects of [sic] facility on groundwater in [sic] lower carbonate acquifer [sic]." Gaffney Affidavit at 2. Mr. Gaffney incorporates by reference comments that have previously been submitted by Inyo County to DOE. In the comments, however, Mr. Gaffney actually acknowledges that Inyo County's scientific data support DOE's conclusion that the upward gradient will prevent migration of radionuclides from the repository to the lower carbonate aquifer. *Id.* at Gaffney Affidavit, Attach. A at Supp. at 12.

There are a number of additional flaws in Mr. Gaffney's affidavit. First, Inyo County has not demonstrated that he is qualified to provide expert testimony regarding the aquifers in the

region or any other subject. Mr. Gaffney does not provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Gaffney Affidavit at 1. Mr. Gaffney does not explain the nature of his "environmental planning experience" or where he obtained that experience. Yet, it is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). In this case, Inyo County has failed to meet that burden and Mr. Gaffney's affidavit and this contention should be rejected.

The affidavit of Dr. Bredehoeft, also relied upon by Inyo County for this contention, merely adopts the allegations contained in paragraph 5 of this contention. In his report cited in paragraph 5 of this contention, Dr. Bredehoeft expressly stated as a disclaimer that he was "*making no assertions about the likelihood of contaminants migrating in the Carbonate Aquifer.*" Bredehoeft and King, "The Potential for Contaminant Transport through the Carbonate Aquifer Beneath Yucca Mountain, Nevada," Hydrodynamics Group LLC, 2008, (LSN# CAL000000029 at 3) (emphasis in original). Dr. Bredehoeft's report reiterated in its summary and conclusion that, "[w]e are in no way inferring that movement of contaminants from the repository through the Carbonate Aquifer is likely – only that it should be safeguarded from occurring." *Id.* at 18. These statements demonstrate that the report does *not* provide support for the allegations for which it is cited and clearly contradicts Dr. Bredehoeft's

wholesale adoption of paragraph 5. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

In addition, neither paragraph 5 nor the expert affidavits attempt to demonstrate that a "materially different result would be or would have been likely" if the contention were proven to be true. This contention should therefore be rejected.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

This contention does not raise an issue material to the findings NRC must make because DOE is not required to perform a "worst case" analysis or to consider "remote and speculative" possibilities.

In its NEPA documents, DOE analyzed the potential environmental impacts with respect to the lower carbonate aquifer. On the basis of studies performed by DOE and Inyo County based on the simple flow model, DOE determined that "Inyo County and DOE agree that the pathway simulated in the simple flow model is not a viable pathway for contaminants originating at the repository site as long as there is an upward gradient in the carbonate aquifer, which has

been observed in boreholes in the Yucca Mountain vicinity." Repository SEIS, Vol. I at 3-34. DOE observed that:

> Data from the few wells that penetrate the lower carbonate aquifer indicate that it has an upward gradient; that is, on well penetration, water rises in the well to an elevation above the aquifer. This occurred at a deep well near Yucca Mountain where the water level, or potentiometric head, of the carbonate aquifer was about 20 meters (66 feet) higher than the water level in the overlying volcanic aquifer. It also occurred in a well drilled for the Nye County program about 19 kilometers (12 miles) south of the repository site where the water rose 8 meters (26 feet) higher than the water in the overlying volcanic aquifer. Several other wells near Yucca Mountain that extend as deep as the confining unit at the base of the lower volcanic aquifer show higher potentiometric levels in that unit than in the overlying volcanic aquifers. This might by another indication of an upward hydraulic gradient in the carbonate aquifer.

Repository SEIS, Vol. I at 3-44.

Inyo County's contention seeks to require DOE to consider a worst case scenario in which the upward gradient would be eliminated or reversed. An agency is not required, however, to perform a worst case analysis in order to satisfy NEPA's procedural requirements. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 356 (1989). In eliminating the "worst case" requirement from its regulations, the Council on Environmental Quality (CEQ) pointed out that "one can always conjure up a worse 'worst case'" by adding more variables to a hypothetical event, 50 Fed. Reg. 32,234 (Aug. 8, 1985), and that "'worst case analysis' is an unproductive and ineffective method . . . one which can breed endless hypothesis and speculation," 51 Fed. Reg. 15,620 (Apr. 25, 1986). In *Methow Valley*, the Supreme Court held that the CEQ acted reasonably in eliminating the requirement that an agency conduct a worst-case analysis as part of a NEPA review and reversed a Court of Appeals' decision finding an EIS inadequate on the grounds that the agency had failed to conduct a worst case analysis. The Court

noted that "CEQ regulations are entitled to substantial deference," and that the "worst case analysis" requirement had been abandoned for the well-considered reason that it had "distort[ed] the decision-making process by overemphasizing highly speculative harms." *Methow Valley*, 490 U.S. at 356; *Edwardsen v. U.S. Dep't of Interior*, 268 F.3d 781, 785 (9th Cir. 2001) ("[A]n EIS need not include a worst case analysis.").

Inyo County's contention raises only an implausible hypothetical scenario in which pumping is allowed to occur at levels that would risk the reversal of the upward gradient. Inyo County alleges that *if* the upward gradient is eliminated under some uncertain level of future groundwater pumping, the gradient *might* no longer be a barrier to contaminants from the repository entering the lower carbonate aquifer. This allegation is based solely on the hypothetical and speculative possibility that: 1) the upward gradient *could be* reversed under some uncertain circumstance; 2) pumping would be allowed to occur at levels high enough to potentially contribute to such circumstance; and 3) if the upward gradient *were* reversed, it *might* no longer serve as a barrier to contaminants entering the lower carbonate aquifer.

Inyo County offers no evidence to demonstrate that these scenarios are any more than "remote and speculative possibilities," which DOE is not required to consider under NEPA. *Fla. Power & Light Co.* (Turkey Point Units 3 & 4), LBP-81-14, 13 NRC 677, 688 (1981); *Public Serv. Elec. & Gas Co.* (Hope Creek Generating Station), ALAB-518, 9 NRC 14, 17 (1979), citing *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 551 (1978); *Natural Res. Def. Council v. Morton*, 458 F.2d 827, 837-38 (D.C. Cir. 1972).

For these reasons, in addition to those addressed above, this contention must be rejected.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R § 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

For the reasons discussed in section d. above, this contention does not raise a genuine dispute on a material issue of law or fact because DOE adequately analyzed the potential impacts of groundwater pumping.

5. CONTENTION NO. 5 - INY-NEPA-3 - FAILURE TO PROVIDE A COMPLETE AND ADEQUATE DISCUSSION OF THE NATURE AND EXTENT OF THE REPOSITORY'S CUMULATIVE IMPACT ON GROUNDWATER IN THE VOLCANIC-ALLUVIAL AQUIFER.

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain , Nye County Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the cumulative environmental impacts of the proposed repository on groundwater in the volcanic-alluvial aquifer.

RESPONSE

In this contention, Inyo County alleges that the 2002 FEIS is deficient because DOE failed to analyze the cumulative environmental impacts on groundwater in the volcanic-alluvial aquifer. This contention is identical to CAL-NEPA-24 and raises the same issue that the NRC Staff raised in its report on the adoption of the DOE EISs.

Although DOE has agreed to perform this analysis and supplement its EIS at the request of the NRC Staff, DOE's agreement does not make this an admissible contention unless Inyo County makes the threshold showings required by 10 C.F.R § 51.109 and 10 C.F.R. § 2.326. All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention be admitted in this proceeding. Specifically, as set forth in Section IV.A.4, Inyo

County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Moreover, its environmental contention must be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including "with a specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.,* to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting expert affidavits. In particular, the affidavit of Mr. Matthew Gaffney contains no analysis or other information to satisfy the requirements of demonstrating that these criteria have been met. First, his affidavit fails to demonstrate that a "materially different result would be or would have been likely" if the contention were proven to be true. Nor does he "set forth the factual or technical bases for the movant's claim that the criteria of paragraph (a) [of § 2.326] have been satisfied." Rather, Mr. Gaffney's affidavit does nothing more than make the following statement about this contention: "The DOE's EIS and SEIS analysis are inadeuqate [sic] regarding[sic] the effects of facility[sic]on groundwater in volcanic alluvial acquifer[sic]." Gaffney Affidavit at 2. Mr. Gaffney also adopts and attaches to his affidavit comments submitted by the Chairman of the Inyo County Board of Supervisors. Those comments, however, do not address the subject matter of this contention—the groundwater in the volcanic alluvial aquifer—but address the lower carbonate aquifer and the effects of ground water pumping on the aquifers. No mention is made of the effect of the repository on the

volcanic alluvial aquifer.[23] Paragraph 5 of the contention, which is not addressed by Mr. Gaffney, fails to provide any analysis, studies or data that would support a finding that the contention raises a significant environmental issue. Paragraph 5 only discusses the NRC Staff's reasoning for requesting DOE to undertake additional analysis but the significance of the environmental issue is never discussed. The Staff's request that DOE undertake further study does not provide adequate support that this contention should be admitted and litigated in this proceeding.

There are additional flaws in Mr. Gaffney's affidavit. Inyo County has not demonstrated that he is qualified to provide expert testimony regarding the aquifers in the region or any other subject. Mr. Gaffney does not provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Gaffney Affidavit at 1. Mr. Gaffney does not explain the nature of his "environmental planning experience" or where he obtained that experience. Yet, it is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). In this case, Inyo County has failed to meet that burden and Mr. Gaffney's affidavit and this contention should be rejected

a. Statement of Issue of Law or Fact to be Controverted

Because this issue is the subject of a supplement being prepared by DOE, if the Board finds that the requirements of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326 have been met and that

[23] Mr. Gaffney never identifies by number the contentions he is supporting nor does he identify the portion of the comments he relies upon to support his opinion. DOE has assumed that his affidavit is offered in support of Inyo County's groundwater contentions.

Mr. Gaffney is a qualified expert, consideration of this contention should be deferred until DOE issues its supplement. If Inyo County disagrees with the resolution of this issue in the supplement, this issue can be raised at that time.

b. Brief Explanation of Basis

See section a. above.

c. Whether the Issue is Within the Scope of the Proceeding

See section a. above.

d. Whether the Issue is Material to the Findings that the NRC Must Make

See section a. above.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R § 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

See section a. above.

6. CONTENTION NO. 6 - INY-NEPA-4 - FAILURE TO PROVIDE A COMPLETE AND ADEQUATE DISCUSSION OF THE NATURE AND EXTENT OF THE REPOSITORY'S CUMULATIVE IMPACT FROM SURFACE DISCHARGE OF GROUNDWATER

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain , Nye County Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the impacts to public health and safety and other cumulative environmental impacts the discharge of potentially contaminated groundwater to the surface.

RESPONSE

In this contention, Inyo County alleges that DOE failed to adequately analyze the "public health and safety and other cumulative environmental impacts [of] the discharge of potentially contaminated groundwater to the surface." Petition at 50. This raises essentially the same issue that the NRC Staff raised in its report on the adoption of the DOE NEPA documents, except that it proposes that DOE agree to evaluate surface discharges in Inyo County.

Although DOE has agreed to perform an analysis of the cumulative impacts from the discharge of potentially contaminated groundwater and supplement its NEPA documents at the request of the NRC Staff, DOE's agreement does not make this an admissible contention unless Inyo County makes the threshold showings required by 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326. All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R.

§ 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention, be admitted in this proceeding. Specifically, as set forth in Section IV.A.3, Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Inyo County's environmental contention must also be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including a "specific explanation of why it has been met." As noted in Section IV.A.3 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.*, to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting affidavits. Of the three affidavits attached to the Petition, only two relate to this contention. *See* Gaffney Affidavit and Smith Affidavit. The affidavit of Mr. Gaffney does not refer to any particular contentions and is never referenced in this contention. Mr. Gaffney's affidavit concludes, without supporting evidence or explanation, that "The DOE's EIS and SEIS analysis are inadeuqate [sic] regarding effects from discharge of potentially contaminated groundwater from [sic] lower carbonate acquifer [sic] in California." Gaffney Affidavit at 2. Mr. Gaffney incorporates by reference comments that have previously been submitted by Inyo County to DOE. The comments only refer to potential surface discharge in the context of a finalized mitigation plan, which Inyo County "recognizes that NEPA does not

require." Gaffney Affidavit, Attach. A at 2. Mr. Gaffney provides no evidence or analysis to support the allegations raised in paragraph 5 of this contention.

There are additional flaws in Mr. Gaffney's affidavit. Inyo County has not demonstrated that he is qualified to provide expert testimony regarding the aquifers in the region or any other subject. Mr. Gaffney does not provide any evidence of academic training of any kind. His entire statement of qualifications consists of the following statement: "My professional training and experience are as follows: Three years of environmental planning experience." Gaffney Affidavit at 1. Mr. Gaffney does not explain the nature of his "environmental planning experience" or where he obtained that experience. Yet, it is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). In this case, Inyo County has failed to meet that burden and Mr. Gaffney's affidavit and this contention should be rejected.

The affidavit of Dr. Smith, also relied upon by Inyo County for this contention, merely adopts the allegations contained in paragraph 5 of this contention. Smith Affidavit at 2. Paragraph 5 of this contention merely sets forth the same concerns raised by the NRC Staff in its report on the adoption of the DOE NEPA documents, except that it alleges that the evaluation already being conducted by DOE should specifically include an evaluation of surface discharge points in Inyo County. Dr. Smith is not referenced in paragraph 5 of this contention, nor does he provide any explanation or discussion to support this contention. Finally, Dr. Smith offers no academic training or experience in hydrology. He is a geologist whose training and experience involves volcanology and Igneous Petrology, among other things. Based on his curriculum vitae,

he is not qualified to provide expert testimony regarding groundwater contamination. His affidavit should be disregarded and this contention should be rejected.

a. Statement of Issue of Law or Fact to be Controverted

The issue presented by this contention is the subject of a supplement being prepared by DOE with one exception. In paragraph 5 of this contention, Inyo County requests that the evaluation already being conducted by DOE specifically include an evaluation of surface discharge points in Inyo County. *See* Petition at 55. In its evaluation undertaken at the request of the NRC Staff, DOE does not intend to assume at the outset that discharge points in Inyo County are affected. Instead, DOE will rely on: (1) radiological and non-radiological contaminant concentrations predicted for groundwater at the reasonably maximally exposed individual (RMEI) location and (2) groundwater pathways beyond the RMEI location as simulated by the Death Valley Regional Ground-Water Flow System model (developed by the United States Geological Survey) for current conditions and for a future wetter climate. The evaluation of potential discharge locations will depend on the output of the model. Potential discharge locations that coincide with the flow pathways will be evaluated in the supplement. Impacts for a future wetter climate will be evaluated based on a sealing factor for the groundwater specific discharge from the TSPA-LA. The use of the scaling factor is appropriate because the regional modeling shows that the predominant flowpaths continue in the same volcanic-alluvial aquifer and the aquifer beyond the RMEI location is subject to similar changes in hydrologic conditions under the future wetter climate. If the Board finds that the requirements of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326 have been met, consideration of this contention should be deferred until DOE issues its supplement. If Inyo County disagrees with the resolution of this issue in the supplement, this issue can be raised at that time.

b. Brief Explanation of Basis

See section a. above.

c. Whether the Issue is Within the Scope of the Proceeding

See section a. above.

d. Whether the Issue is Material to the Findings that the NRC Must Make

See section a. above.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

See discussion of 10 C.F.R. § 51.109 and 10 C.F.R. § 2.326 above.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

See section a. above.

7. CONTENTION NO. 7 - INY-NEPA-5 - FAILURE TO PROVIDE A COMPLETE AND ADEQUATE DISCUSSION OF THE NATURE AND EXTENT OF THE NECESSARY MITIGATION AND REMEDIATION MEASURES FOR RADIONUCLIDES SURFACING AT ALKALI FLAT/FRANKLIN LAKE PLAYA

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain , Nye County Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the necessary mitigation and remediation measures that are necessary to protect the public health and safety and they do not adequately analyze other environmental impacts from radionuclides surfacing within Inyo County, California.

RESPONSE

In this contention, Inyo County alleges that DOE has failed to adequately address mitigation of potential impacts from radionuclides traveling through groundwater in the Amargosa River Drainage into Inyo County and has improperly deferred enacting a mitigation plan to address these potential impacts.

All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention be admitted in this proceeding. Specifically, as set forth in Section IV.A.4, Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its

contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Moreover, its environmental contention must be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including a "specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.,* to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting expert affidavits. In particular, the affidavit of Mr. Matthew Gaffney contains no analysis or other information demonstrating that these criteria have been met. In fact, Mr. Gaffney's affidavit makes no mention at all of mitigation.[24] The only time mitigation is mentioned is in the comments Mr. Gaffney prepared for the Inyo County Board of Supervisors, which are incorporated by reference, and include a sparse three lines of discussion:

> The 2002 FEIS states that water from beneath Yucca Mountain surfaces at Alkali Flat and Franklin Lake Playa, and the 69,000 people could be exposed to contaminated groundwater. The County recognizes that NEPA does not require mitigation measures. However, the County believes it is the DOE's responsibility to implement a mitigation/remediation plan, and an evacuation plan should the repository suffer a catastrophic failure.

Gaffney Affidavit, Attach. A at 2. This is merely a conclusory statement that the County and Mr. Gaffney believe a mitigation plan is required, with no supporting analysis and no attempt to demonstrate that this raises a significant environmental issue or that a "materially different result would be or would have been likely" if this contention were proven to be true. Nor do these

[24] The Inyo County Petition includes three affidavits, two of which label the contentions to which they apply. Mr. Gaffney's affidavit does not reference any contentions. Further, the contention itself makes no mention of reliance on any affidavit.

three sentences "set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) [of § 2.326] have been satisfied."

Finally, based on Mr. Gaffney's scant list of credentials, he should not be considered a "competent individual[] with knowledge of the facts alleged" or an "expert[] in the disciplines appropriate to the issues raised." 10 C.F.R. § 2.326(b). Mr. Gaffney does not provide any evidence of academic training of any kind. His sole qualification consists of "three years of environmental planning experience," including his two years of employment for Inyo County and his current six months of employment for the California Department of Transportation. Gaffney Affidavit, Attach. A at 2. That employment historydoes not make Mr. Gaffney an expert in the wide-ranging areas for which Inyo County uses his affidavit, from socioeconomics to complex analysis of groundwater movement. It is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Inyo County has failed to meet this burden, and it has also failed to demonstrate that Mr. Gaffney has sufficient expertise to support the requirements of 10 C.F.R. § 2.326. His affidavit and this contention should therefore be rejected.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE express no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

This contention does not present a material issue because DOE's NEPA documents adequately address potential mitigation measures. Inyo County cannot demonstrate that DOE failed to provide "a reasonably complete discussion of possible mitigation measures" in satisfaction of NEPA's requirements. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 352 (1989).

Inyo County's assertion that DOE must "implement a mitigation and remediation plan for radionuclides transported by groundwater," Petition at 59, is clearly not a requirement under NEPA. It is well established that NEPA "does not impose any substantive requirements on federal agencies – it exists to ensure a process." *The Lands Council v. McNair,* 537 F.3d 981, 1000 (9th Cir. 2008). The statute requires only that possible mitigation measures "be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated," *City of Carmel-by-the-Sea v. U.S. Dep't of Transp.,* 123 F.3d at 1142, 1150 (9th Cir. 1997). "NEPA demands no fully developed plan or detailed explanation of specific measures which will be employed to mitigate adverse environmental effects." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003) (quotations omitted); *see also Okanogan Highlands Alliance v. Williams,* 236 F.3d 468, 476 (9th Cir. 2000) (finding that a mitigation plan "need not be legally enforceable, funded, or even in final form to comply with NEPA's procedural requirements") (quotations omitted). DOE, therefore, need not "implement" any mitigation or remediation plan under NEPA. As the Supreme Court has held, "it would be

inconsistent with NEPA's reliance on procedural mechanisms . . . to demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act." *Robertson,* 490 U.S. at 353.[25]

DOE has also not improperly deferred any mitigation analysis, as Inyo County suggests. Petition at 60-61. In fact, DOE has fully evaluated the substantive areas of concern to Inyo County, as Inyo County itself demonstrates in its contention by citing to the many discussions of California groundwater impacts in the NEPA documents.[26]

First, DOE has discussed its intention to implement groundwater quality monitoring as one of its mitigation actions. Repository SEIS, Vol. I at 9-9, Vol. III at CR-527; 2002 FEIS, Vol. I at 9-5. Although Inyo County protests that "no details are provided," Petition at 59, DOE has articulated the specific best management practices it will use to protect groundwater from contamination.[27] In the early stages of a project's development, an EIS containing even "merely

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[25] As DOE points out, an emergency plan is required in any event by *NRC regulations,* rather than by NEPA. Repository SEIS, Vol. III at CR-527 ("During the active, preclosure phases of the project, DOE would be required by NRC regulations (10 CFR 63.161) to develop and be prepared to implement an emergency plan to cope with radiological accidents that may occur at the repository operations area.").

[26] DOE has also conducted a thorough evaluation of the potential for groundwater impacts in Inyo County. *See* Repository SEIS, Vol. I at 3-29 to 38.

[27] DOE states that it will:

> Recycle water collected in subsurface areas for use in dust suppression and other activities.
>
> - Implement measures to minimize the potential for water use during operations that could interfere with waste isolation in the repository.
> - Minimize surface disturbance, thereby minimizing changes in surface-water flow and soil porosity that could change infiltration and runoff rates.
> - Monitor to detect and define unanticipated spills, releases, or similar events.
> - Construct evaporation ponds with synthetic liners and/or leak detection systems to prevent infiltration and potential groundwater contamination.

Repository SEIS, Vol. I at 9-5. DOE has also made it clear that its "postclosure monitoring would provide early detection of any unusual conditions in the groundwater," which would allow "ample time to plan corrective measures to protect the public." Repository SEIS, Vol. III at CR-527.

conceptual" discussion of mitigation measures satisfies NEPA. *Robertson*, 490 U.S. at 339, 352-53.

Second, contrary to Inyo County's allegations, Petition at 62, DOE has provided a sufficient "hard look" at the possible impact of a flood during the construction phase and has adequately discussed related mitigation measures from surface water impacts. DOE specifically addressed the potential consequences of a flood. Repository SEIS, Vol. I at 3-26-28. It also discussed in depth its proposed mitigation measures to protect against surface water contamination, including contamination from possible flooding.[28] DOE has therefore met NEPA's requirement of a "reasonably complete discussion" of possible mitigation measures related to flooding. *See Robertston,* 490 U.S. at 352.

Finally, DOE is not required to include an emergency plan in its LA, contrary to Inyo County's argument. Petition at 60-62. All that is required under DOE's regulatory obligations at this stage is a description of the emergency plan, and that description need only contain the information that was reasonably available at the time of docketing. *See* 10 C.F.R. § 63.21(c)(21) (requiring "[a] description of the plan for responding to, and recovering from, radiological emergencies"); 10 C.F.R. § 63.21(a) (requiring that the LA "be as complete as possible in light of information that is reasonably available at the time of docketing"). These commitments are

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[28] To select only a few examples, DOE commits to:

- In and near floodplains, follow reclamation guidelines. . . .
- Conduct fueling operations and store hazardous materials and other chemicals in bermed areas or use other appropriate secondary containment to reduce the likelihood of inadvertent releases.
- Store hazardous materials away from floodplains to decrease the probability of an inadvertent spill in these areas. . . .
- Use measures to prevent runoff or floodwaters from reaching areas where they could contact contaminated surfaces or cause release of hazardous materials (such as constructing structures above specified flood elevations, designing facilities to withstand a specific flood event, or constructing stormwater ponds or diversion structures).

Repository SEIS, Vol. I at 9-4.

consistent with the multi-phased nature of the licensing process and the level of detail that the NRC expects to see at this early stage.[29]

Inyo County argues that since 10 C.F.R. § 63.161, which requires the implementation of an emergency plan during the active preclosure phases of the project, incorporates the criteria of 10 C.F.R. § 72.23(b), this mandates that the LA include an emergency plan. Petition at 61-62. Section 63.161 requires only that DOE develop and be prepared to implement a plan for radiological accidents that may occur at the geologic repository operation area. The emergency plan must be based on the criteria of Section 72.32(b). DOE has committed to submit this plan within six months prior to submittal of the license application to receive and possess. Section 72.23(b) lists 16 criteria that are to accompany an emergency plan. DOE is not required to discuss these criteria until it completes its actual emergency plan under Section 63.161.[30]

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[29] The NRC addressed this point in the Statements of Consideration for Part 63:

> [P]art 63 provides for a multi-staged licensing process that affords the Commission the flexibility to make decisions in a logical time sequence that accounts for DOE collecting and analyzing additional information over the construction and operational phases of the repository. The multi-staged approach comprises four major decisions by the Commission: (1) Construction authorization; (2) license to receive and emplace waste; (3) license amendment for permanent closure; and (4) termination of license. The time required to complete the stages of this process . . . is extensive and will allow for generation of additional information. Clearly, the knowledge available at the time of construction authorization will be less than at the subsequent stages.

Final Rule: Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, NV, 66 Fed. Reg. 55,732, 55,738 (Nov. 2, 2001).

[30] DOE will provide the NRC with an emergency plan, fully compliant with 10 C.F.R. § 72.32(b), no later than 6 months before submitting the updated application for a license. SAR Vol. II, § 5.7 at 5-33. Until that time, SAR § 5.7 contains more than 50 pages of discussion about the plan, including various tables and figures. It also addresses each of the 16 subjects listed in 10 C.F.R. § 72.32(b). These subjects include:

1. Facility Description (SAR subsection 5.7.2)
2. Types of Accidents (SAR subsection 5.7.3)
3. Classification of Accidents (SAR subsection 5.7.3)
4. Detection of Accidents (SAR subsection 5.7.4)
5. Mitigation of Consequences (SAR subsection 5.7.5)
6. Assessment of Releases (SAR subsection 5.7.6)
7. Responsibilities (SAR subsections 5.7.1 and 5.7.7.)
8. Notification and Coordination (SAR subsection 5.7.8)
9. Information to be Communicated (SAR subsection 5.7.9)

In sum, DOE has provided a "reasonably complete" discussion of possible mitigation measures regarding groundwater impacts in Inyo County to satisfy NEPA's requirements. *Robertson,* 490 U.S. at 352. This contention's claims should therefore be rejected.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R § 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

For the reasons discussed in section d. above there is no genuine dispute on a material issue of law or fact regarding the adequacy of DOE's mitigation analysis because DOE has provided a "reasonably complete" discussion of possible mitigation measures for groundwater impacts in Inyo County.

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10. Training (SAR subsection 5.7.10)
11. Safe Condition (SAR subsection 5.7.11)
12. Exercises (SAR subsection 5.7.12)
13. Hazardous Chemicals (SAR subsection 5.7.13)
14. Comments on the Plan (SAR subsection 5.7.14)
15. Offsite Assistance (SAR subsection 5.7.15)
16. Arrangements Made for Providing Information to the Public (SAR subsection 5.7.16)

8. CONTENTION NO. 8 - INY-SAFETY-3 - FAILURE TO ADEQUATELY DESCRIBE AND ANALYZE THE VOLCANIC FIELD IN THE GREENWATER RANGE IN AND ADJACENT TO DEATH VALLEY NATIONAL PARK

The applicant (or "DOE") failed to include in the Yucca Mountain Repository License Application ("LA") and Safety Analysis Report ("SAR") and description and analysis of the probability of igneous activity disrupting the site of the proposed repository. The applicant reports in the SAR in sections 2.2.2.2.3.1, 2.3.11.2.2 and related sections, that the probability of igneous activity disrupting a repository drift is 1.7 x 10-8 events/year. The Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain Nye County Nevada, June 2008, ("Final SEIS") reports in section 3.1.3.1.3 (page 3-21) that the average probability of such activity is 1 chance in 6,300 that a volcanic dike could disrupt the repository during the first 10,000 years. These estimates underestimate the probability of igneous activity, likely by two or more orders of magnitude, because the applicant does not include the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations.

RESPONSE

Inyo County alleges that DOE underestimates the probability of igneous activity disrupting a repository drift by two or more orders of magnitude because: (1) DOE "does not include the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations"; and (2) DOE "ignores volcanic activity in the Greenwater Range" despite "chemical, mineralogical and age similarities to those [volcanic rocks] near Yucca Mountain." Petition at 64, 69. As discussed below, Inyo County's argument is not material, lacks appropriate factual and expert support, and fails to raise a genuine dispute of

material fact because, among other things, Death Valley and the Greenwater Range volcanic fields *were* considered in DOE's assessment of future igneous activity.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

In its attempt to demonstrate that this contention is material to the findings that the NRC must make in this proceeding, this section of the contention identifies various regulations. Inyo County concludes this general description of various sections of 10 C.F.R. Part 63 with the mere assertion that "[t]his contention alleges non-compliance with these regulatory provisions and therefore raises a material issue within the scope of the licensing proceeding." Petition at 66. 10 C.F.R. § 2.309(f)(1)(iv) requires a showing by a petitioner that "the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding ...," not merely a citation of the relevant regulations. In this regard, a contention is material only if its resolution would make a difference in the outcome of the proceeding. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333-34 (1999).

While the Advisory PAPO Board directed the potential parties to provide a "citation to a statute or regulation that, explicitly or implicitly, has not been satisfied" because specific citations are "preferable" to general citations (*U.S. Dep't of Energy* (High-Level Waste Repository: Pre-Application Matters, Advisory PAPO Board), LBP-08-10, 67 NRC (slip op. at 7) (June 20, 2008) (Case Management Order)), this direction cannot be read to dispense with the well-recognized requirement that resolution of the contention would make a difference in the outcome of the proceeding, particularly since the Case Management Order focused exclusively on "format" and "procedural matters." Case Management Order at 3.

In particular, because the issue presented in this contention concerns postclosure performance, Inyo County must demonstrate that the resolution of the issue would prevent the NRC from finding that there is a "reasonable expectation" that the radioactive materials can be disposed of without unreasonable risk to the health and safety of the public. *See* 10 C.F.R. § 63.31(a)(2). However, as discussed in Section IV.A.3, *supra*, and in 10 C.F.R. § 63.101 (a)(2), "because of the uncertainties inherent in the understanding of the evolution of the geologic setting, biosphere, and engineered barrier system," DOE is *not* required to provide complete assurance that each postclosure performance objective specified at § 63.113 will be met. Therefore, Inyo County must demonstrate that there is no reasonable expectation that the overall objective could be met. This contention makes no such showing.

The method the DOE used in addressing the potential impacts to the repository from an igneous event is consistent with what the NRC contemplates in 10 C.F.R. § 63.304, which recognizes that determining that there is a "reasonable expectation": (1) requires less than absolute proof, (2) accounts for the inherently greater uncertainties in making long-term projections of disposal system performance, (3) does not exclude important parameters from

assessments and analyses due to the difficulty in quantifying with a high degree of confidence, and (4) focuses on performance assessments and analyses on the full range of defensible and reasonable parameter distributions rather than only upon extreme physical situations and parameter values.

However, Inyo County fails to demonstrate that resolution of the contention would make a difference in the proceeding. As stated in Section IV.A.3, *supra*, Part 63 permits DOE to use probabilistic analyses to calculate potential pre and postclosure radiation doses, 10 C.F.R. § 63.102(j), and to report those doses as mean doses. 10 C.F.R. § 63.303. Thus, contentions failing to allege that an increase in the mean doses above the regulatory limit, a violation of some other specific requirement, or some significant link between the claimed deficiency and protection of the health and safety of the public or environment are immaterial and inadmissible. *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 89 (200), *aff'd,* CLI-04-36, 60 NRC 631.

Inyo County asserts that, if DOE had considered volcanic activity from a larger volcanic field that included Death Valley, then the probability of igneous activity disrupting a repository drift would increase "likely by two or more orders of magnitude." Petition at 64, 70. However, Inyo County does not explain how considering Death Valley would increase the probability of an igneous event affecting a repository drift. Inyo County is equally silent, and fails to demonstrate, that any increase in the probability of an igneous event would cause the repository performance standards to be exceeded. Therefore, Inyo County's allegations are inadequate to demonstrate that they raise a material issue.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

Section IV.A.3 above discusses the legal standards under 10 C.F.R. § 2.309(f)(1)(v) that require adequate factual support or expert opinion in order for a contention to be admitted. This contention fails to meet those standards because the contention does not reference any expert opinion. Inyo County's Petition does attach an affidavit (Smith Affidavit at 2 (Dr. Eugene Smith)), which purportedly provides expert opinion to support this contention. However, rather than providing information to support the assertions in this contention, the affidavit simply "adopt[s]" the otherwise unsupported assertions in the contention. Smith Affidavit at 2. That approach falls short of the requirement to provide conclusions supported by reasoned bases or explanation.

Furthermore, Inyo County argues that if DOE had considered an expanded volcanic region, then the probability of igneous activity disrupting a repository drift would increase "likely by two or more orders of magnitude." Petition at 64, 70. Yet Dr. Smith's adoption of the statement still fails as a valid supporting position because he provides no support for this assertion. He provides no modeling results or evaluations, nor does he state that he performed any such evaluations. There is no evidence in the Petition or its attachments as to how Inyo County arrived at this 2+ order-of-magnitude change in probability. Accordingly, the Board must treat Dr. Smith's conclusory statement as speculation that is inadequate to support admissibility of a contention. Conclusory statements cannot provide "sufficient" support for a contention, even if they are proffered by an alleged expert. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

The Licensing Board also must dismiss this contention because it does not establish that a genuine dispute exists with DOE on a material issue of law or fact. For background, DOE estimates that the mean annual frequency of an igneous event disrupting a repository drift is 1.7 x 10^{-8} events/year. SAR at 2.3.11-21. This probability "was developed from the results of an expert elicitation that was completed in 1996." SAR at 2.3.11-9. This expert elicitation process was the basis for DOE's Probabilistic Volcanic Hazards Assessment (PVHA) which culminated in a publicly-available PVHA Report. SAR at 2.3.11-12 (referencing CRWMS M&O 1996 (LSN# DEN000861156)). The PVHA Report documents the judgments of the ten experts who participated in the elicitation process on various aspects of the PVHA, including the volcanic/tectonic setting, event definition, region of interest, and event counts. PVHA Report, Appendix E (Elicitation Interview Summaries) (LSN# DEN000861156).

Inyo County's entire argument relies on the assumption that DOE "does not include the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations." Petition at 64. But DOE did consider this volcanic field. The PVHA was conducted using an expert panel that based its assessments on the spatial and temporal patterns of volcanism in the Yucca Mountain Region and in the region including volcanism in the Death Valley volcanic field in the Greenwater Range. Documentation in the PVHA Report (Figures 3-23, 3-28, 3-32, 3-46, and 3-51), clearly shows that at least 5 experts explicitly considered igneous activity in the Greenwater Range in the development of their models for regional igneous activity. *See also id.* at Appendix E (example discussions in elicitation interviews), at RC-3 of 20 (elicitation interview of Dr. Richard W. Carlson), GW-1 of 15 and GW-3 of 15 (elicitation interview of Dr. George P.L. Walker). Generally, the Greenwater Range activity was considered

in the context of alternative regions of interest. *E.g.*, *id.* at Figures 3-23, 3-28, 3-46, and 3-51. Therefore, information related to the Death Valley volcanic field in the Greenwater Range was not ignored by DOE, but was considered by the PVHA expert panel members in their evaluations.

Accordingly, this contention does not raise a genuine dispute because DOE considered the very information that Inyo County alleges it did not. Because Inyo County has failed to controvert a position taken by the applicant in the Application, the contention must be dismissed. *See Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant Units 3 and 4), LBP-08-16, 68 NRC __, (slip op. at 18, 29, 39-40, 42) (Sept. 12, 2008); *Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

9. CONTENTION NO. 9 - INY-NEPA-6 - FAILURE TO ADEQUATELY DESCRIBE AND ANALYZE THE DESCRIBE AND ANALYZE [SIC] THE VOLCANIC FIELD IN THE GREENWATER RANGE IN AND ADJACENT TO DEATH VALLEY NATIONAL PARK THUS FAILING TO ASSESS THE POTENTIAL ENVIRONMENTAL IMPACTS RESULTING FROM IGNEOUS ACTIVITY THAT COULD DISRUPT THE REPOSITORY

The applicant (or "DOE") failed to include in the Yucca Mountain Repository License Application ("LA"), Safety Analysis Report ("SAR"), Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") and Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, June 2008, ("Final SEIS") an adequate description and analysis of the probability of igneous activity disrupting the site of the proposed repository. This omission is the result of ignoring the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations. As a result of this omission, the documents underestimate the probability of igneous activity, likely by two or more orders of magnitude; thus, neither the Final EIS nor the Final SEIS adequately describe the potential environmental impacts that may result from igneous activity disrupting the repository.

RESPONSE

In this contention, Inyo County asserts that DOE in the Application, SAR, FEIS and Repository SEIS "ignor[ed] the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations." Petition at 71.

All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting

that its contention be admitted in this proceeding. Specifically, as set forth in Section IV.A.4, Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Moreover, its environmental contention must be supported by the affidavit of a qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including a "specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§ 2.326] requirements rigorously – *i.e.,* to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2) ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting expert affidavits. In particular, the affidavit of Dr. Eugene I. Smith contains no analysis or other information demonstrating that these criteria have been met. Rather, Dr. Smith's affidavit does nothing more than adopt paragraph 5 of the contention and previously submitted comments without further explanation or analysis. Smith Affidavit at 2. Paragraph 5 of the contention specifically states that the Application, SAR, FEIS, or Repository SEIS "ignore[] the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations." Petition at 71. This is contrary to Inyo County's burden under §§ 51.109 and 2.326 to demonstrate that this contention raises a significant environmental issue. Neither paragraph 5 nor the adopted comments attempt to demonstrate that under § 2.326(a)(3) a "materially different result would be or would have been likely" if the contention were proven to be true. Nor do they "set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) [of § 2.326] have been satisfied."

Further, Inyo County argues that if DOE had considered an expanded volcanic region, then the probability of igneous activity disrupting a repository drift would increase "likely by two or more orders of magnitude." Petition at 71, 72, 74. Yet Dr. Smith's adoption of the statement still fails as a valid supporting position because he provides no support for this bare assertion. He provides no modeling results or evaluations, nor does he state that he performed any such evaluations. There is no evidence in the Petition or its attachments as to how Inyo County arrived at this 2+ order-of-magnitude change in probability. Accordingly, the Board must treat Dr. Smith's conclusory statement as speculation that is inadequate to support admissibility of a contention. Conclusory statements cannot provide "sufficient" support for a contention, simply because they are proffered by an alleged expert. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

In summary, Dr. Smith has failed to provide any factual or technical basis for this contention and the contention should therefore be rejected.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

d. Whether the Issue is Material to the Findings that the NRC Must Make

This contention does not present a material issue because DOE's NEPA and PVHA documents adequately addressed the Death Valley volcanic fields in the Greenwater Range and the probability of igneous activity was not underestimated by two or more orders of magnitude. Under NEPA, a potential intervenor must demonstrate that DOE has failed to take a "hard look" at environmental consequences. *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21 (1976). An EIS is adequate under this standard if it "contains a reasonably thorough discussion of the significant aspects of the probable environmental consequences." *Churchill County v. Norton*, 276 F.3d 1060, 1071 (9th Cir. 2001); *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992).

The probability of basaltic lava intruding into the repository is described in Section 3.1.3.1 of the 2002 FEIS and Section 3.1.3.1.3 of the Repository SEIS. As stated in the 2002 FEIS (page 3-27):

> Differing views on the likelihood of volcanism near Yucca Mountain result from uncertainties in the hazard assessment. To address these uncertainties, DOE has performed analyses, conducted extensive volcanic hazard assessments, considered alternative interpretations of the geologic data, and consulted with recognized experts, representing other Federal agencies (for example, the U.S. Geological Survey), national laboratories, and universities (for example, the University of Nevada and Stanford University). In 1995 and 1996, a panel of 10 scientists from these agencies and institutions and with expertise in volcanism reviewed the extensive information on volcanic activity in the Yucca Mountain vicinity and assessed the likelihood that future volcanic activity could occur at or in the vicinity of the repository (DIRS 151945-CRWMS M&O 2000, p. 12.2-21).
>
> The probability of basaltic lava intruding into the repository is expressed as the annual probability that a volcanic event would disrupt (intersect) a repository, given that a volcanic event would occur during the period of concern. The expert panel assessed uncertainties associated with the data and models used to evaluate

> the potential for disruption of the potential Yucca Mountain Repository by a volcanic intrusion (dike) (DIRS 100116-CRWMS M&O 1996, all).

The expert panel referred to above in the 2002 FEIS and Repository SEIS were the principal sources for DOE's Probabilistic Volcanic Hazards Assessment (PVHA) which culminated in a publicly-available PVHA Report. SAR at 2.3.11-12 (referencing CRWMS M&O 1996 (LSN# DEN000861156)).

For instance, DOE estimates that the mean probability of igneous activity disrupting a repository drift is 1.7 x 10-^{8} events/year. SAR at 2.3.11-21. This probability "was developed from the results of an expert elicitation [PVHA] that was completed in 1996." SAR at 2.3.11-9. The PVHA Report documents the judgments of the ten experts who participated in the elicitation process on various aspects of the PVHA, including the volcanic/tectonic setting, event definition, region of interest, and event counts. PVHA Report at Appendix E (Elicitation Interview Summaries).

Inyo County's entire argument relies on the assumption that DOE "ignore[ed] the Death Valley volcanic field in the Greenwater Range as part of the area to be considered for hazard calculations." Petition at 71. But DOE did consider this volcanic field. The PVHA was conducted using an expert panel that based its assessments on the spatial and temporal patterns of volcanism in the Yucca Mountain Region and in the region including volcanism in the Death Valley volcanic field in the Greenwater Range. Documentation in the PVHA Report (Figures 3-23, 3-28, 3-32, 3-46, and 3-51), clearly shows that at least 5 experts explicitly considered igneous activity in the Greenwater Range in the development of their models for regional igneous activity. *See also id*. at Appendix E (example discussions in elicitation interviews), at RC-3 of 20 (elicitation interview of Dr. Richard W. Carlson), GW-1 of 15 and GW-3 of 15 (elicitation

interview of Dr. George P.L. Walker). Generally, the Greenwater Range activity was considered in the context of alternative regions of interest. *E.g.*, *id.* at Figures 3-23, 3-28, 3-46, 3-51. Therefore, information related to the Death Valley volcanic field in the Greenwater Range was not ignored by DOE, but was considered by the PVHA expert panel members in their evaluations.

In sum, DOE, based on the 2002 FEIS and Repository SEIS and incorporated PVHA Report, adequately considered the Death Valley volcanic field in the Greenwater Range. Therefore, Inyo County can not demonstrate that DOE failed to take a "hard look" at the "environmental impacts resulting from igneous activity that could disrupt the repository." Petition at 71.

Accordingly, this contention does not present a material issue. This contention should therefore be rejected.

For these reasons, in addition to those addressed above, this contention must be rejected.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R § 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

For the reasons discussed in section d. above, there is no genuine dispute on any material issue of law or fact because DOE did assess future igneous activity in Death Valley and the Greenwater Range.

10. CONTENTION NO. 10 - INY-NEPA-7 -FAILURE TO ADDRESS SOCIOECONOMIC IMPACTS IN THE COUNTY OF INYO

This Commission should not adopt DOE's Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, February 2002, ("Final EIS") or DOE's 2008 Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada, June 2008, ("Final SEIS") as is required by 10 CFR 51.109(c), because they are incomplete and inadequate pursuant to National Environmental Policy Act ("NEPA") and NRC regulations at 10 CFR 51, because those documents do not analyze the socioeconomic impacts related cumulative environmental impacts in Inyo County that will potentially result from the proposed repository.

RESPONSE

In this contention, Inyo County alleges that the socioeconomic region of influence in the Repository SEIS and 2002 FEIS should have included Inyo County. Inyo County claims that socioeconomic impacts within its borders, including those arising from transportation of SNF and HLW, have therefore been inadequately addressed.

All NEPA contentions must demonstrate that they meet the criteria of 10 C.F.R § 51.109 and 10 C.F.R. § 2.326, as well as the standards for contentions of 10 C.F.R. § 2.309. Inyo County fails to meet the express requirements of 10 C.F.R. §§ 2.326 and 51.109 in requesting that its contention be admitted in this proceeding. Specifically, as set forth in Section IV.A.4 Inyo County must (1) raise a significant environmental issue; and (2) demonstrate that its contention, if proven to be true, would or would likely result in a materially different outcome in this proceeding. Moreover, its environmental contention must be supported by the affidavit of a

qualified witness that sets forth the factual and/or technical basis supporting the claim that these two criteria have been met, including a "specific explanation of why it has been met." 10 C.F.R. § 2.326(b). As noted in Section IV.A.4 above, "the Commission expects its adjudicatory boards to enforce the [§2.326] requirements rigorously – *i.e.,* to reject out-of-hand reopening motions that do not meet those requirements within their four corners." *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2) ALAB-915, 29 NRC 427, 432 (1989).

Inyo County fails to address any of the mandatory requirements of §§ 51.109 and 2.326 in its contention or supporting expert affidavits. In particular, the affidavit of Mr. Matthew Gaffney contains no analysis or other information demonstrating that these criteria have been met. In fact, Mr. Gaffney's affidavit makes no mention at all of socioeconomic effects.[31] The only time socioeconomic effects are mentioned is in the comments Mr. Gaffney prepared for the Inyo County Board of Supervisors, which are incorporated by reference, and include the statement that "Inyo County should be considered within the 'region of influence' for socio-economic impacts analysis because of it [*sic*] proximity to the site." Gaffney Affidavit, Attach. A at 3. These comments provide no evidence that socioeconomic impacts will occur in Inyo County, and make no attempt to demonstrate that this raises a significant environmental issue or that a "materially different result would be or would have been likely" if this contention were proven to be true. Nor do Inyo County's comments "set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) [of § 2.326] have been satisfied."

Finally, based on Mr. Gaffney's scant list of credentials, he should not be considered a "competent individual[] with knowledge of the facts alleged" or an "expert[] in the disciplines

[31] The Inyo County Petition includes three affidavits, two of which label the contentions to which they apply. Mr. Gaffney's affidavit does not reference any contentions. Further, the contention itself makes no mention of reliance on any affidavit.

appropriate to the issues raised." 10 C.F.R. § 2.326(b). Mr. Gaffney does not provide any evidence of academic training of any kind. His sole qualification consists of "three years of environmental planning experience," including his two years of employment for Inyo County and his current six months of employment for the California Department of Transportation. Gaffney Affidavit at 2. That employment history does not suggest that he has the training or experience to render scientifically valid opinions on the socio-economic impacts of the Yucca Mountain Repository. It is Inyo County's burden to demonstrate that Mr. Gaffney is qualified to be an expert in the field on which the witness is offering expert testimony. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004); *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Inyo County has failed to meet this burden, and it has also failed to demonstrate that Mr. Gaffney has sufficient expertise to support the requirements of 10 C.F.R. § 2.326. His affidavit and this contention should therefore be rejected.

a. Statement of Issue of Law or Fact to be Controverted

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

b. Brief Explanation of Basis

Without prejudice to other positions taken by DOE, DOE expresses no legal objection based upon this requirement.

c. Whether the Issue is Within the Scope of the Proceeding

Contentions challenging DOE's transportation decisions, and the environmental impact statements upon which those decisions are based, are beyond the scope of this proceeding and may also be barred under res judicata or finality principles. To the extent Inyo County's

contention relates to DOE's transportation analysis it is objectionable because the NRC lacks jurisdiction and because of finality. As addressed in Section IV.A.5 above, under the Atomic Energy Act and the Energy Reorganization Act (ERA), NRC does not have regulatory authority over DOE's transportation facilities and activities and thus has no direct NEPA responsibilities with respect to those facilities and activities. To the extent such facilities and activities may contribute to the cumulative impacts of the proposed Yucca Mountain repository, NRC must take DOE's decisions concerning transportation facilities and activities as a given in considering the cumulative impacts of the proposed repository. *See, e.g., Dep't of Transp. v. Pub. Citizen,* 541 U.S. 752 (2004).

Second, in addition to the NRC's lack of regulatory authority over transportation of SNF and HLW, as addressed in Section IV.A.5 above, any challenges to the analysis of environmental impacts arising from DOE transportation decisions, to the extent reviewable, are within the original and exclusive jurisdiction of the federal courts of appeals. In particular, challenges to the April 2004 ROD and the transportation related portions of the 2002 FEIS on which it was based, are no longer subject to review in any forum, as a result of the expiration of the 180 day period to challenge that ROD set forth in Section 119 of the NWPA. In the April 2004 ROD, for example, DOE selected the mostly rail scenario as the transportation mode on a national basis and in the State of Nevada. ROD on Mode of Transportation and Nevada Rail Corridor for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, NV, 69 Fed. Reg. 18,557 (Apr. 8, 2004). Any challenges to DOE's transportation decisions set forth in the October 10, 2008 ROD and the Rail Alignment EIS on which it was based, are also not appropriately a part of this proceeding; such challenges may be pursued only through a petition for review to a federal court of appeals.

d. Whether the Issue is Material to the Findings that the NRC Must Make

For the reasons discussed in section c. above, this issue is not material to the findings NRC must make because, to the extent Inyo County challenges DOE transportation decisions, this is outside the scope of this proceeding and barred under principles of finality. Additionally, this contention does not present an issue material to the findings that the NRC must make because it was reasonable for DOE to use Clark and Nye Counties as the region of influence for its socioeconomic analysis. An agency is entitled to rely on reasonable assumptions in its environmental analyses. *Inland Empire Pub. Lands Council v. U.S. Forest Serv.,* 88 F.3d 754, 762 (9th Cir. 1996), citing *Sierra Club v. Marita,* 845 F. Supp. 1317, 1331 (E.D. Wis. 1994), *aff'd,* 46 F.3d 606 (7th Cir. 1995); *Greenpeace Action v. Franklin,* 14 F.3d 1324, 1335-36 (9th Cir. 1992). As in the case of a reviewing court, it is not the role of the NRC "to decide what assumptions … we would make were we in the Secretary's position, but rather to scrutinize the record to ensure that the Secretary has …. provided a reasoned explanation for his policy assumptions …." *Wyo. Lodging and Rest. Ass'n v. Dep't of the Interior,* 398 F. Supp. 2d 1197, 1214 (D. Wyo. 2005), citing *Am. Iron & Steel Inst. v. Occupational Safety and Health Admin.,* 939 F.2d 975, 982 (D.C. Cir. 1991); *S.F. Baykeeper v. U.S. Army Corps of Eng'rs,* 219 F. Supp. 2d 1001, 1015 (N.D. Cal. 2002). The NRC has already made clear that the decision to adopt DOE's environmental analyses "does not necessarily mean that NRC would independently have arrived at the same conclusions on matters of fact or policy." Proposed Rule, "NEPA Review Procedures for Geologic Repositories for High-Level Waste," 53 Fed. Reg. 16,131, 16,142 (May 5, 1988).

Here, the NRC should defer to DOE's reasonable selection of a two-county region of influence. DOE explained that it selected Clark and Nye counties because over 98% of the

expected repository workforce would reside in these counties. Repository SEIS, Vol. III at CR-360. As such, these counties represent the "area in which repository activities could most influence local economies and populations." Repository SEIS, Vol. I at 3-3; *see also id.* at 3-64. DOE has reasonably explained that "changes in the employment and worker residency of an area are the catalyst for socioeconomic impacts." *Id.,* Vol. III at CR-360. Because DOE has provided reasonable explanations for the assumptions it has made in its NEPA analyses, it is not the Commission's duty to "second guess" those assumptions. *Wyo. Lodging and Rest. Ass'n,* 398 F. Supp. 2d at 1214.

Inyo County provides no evidence that there will even be socioeconomic impacts within its boundary. Its primary argument is that proximity to Yucca Mountain will inevitably cause socioeconomic effects in Inyo County. Petition at 80. But Inyo County provides no studies, data, or analysis to back up this claim. Proximity alone does not prove socioeconomic effects. As DOE has stated, "[a]lthough Inyo County California is nearby, historically, workers have not chosen to live in California while working at the Yucca Mountain Site or the Nevada Test Site." Repository SEIS, Vol. III at CR-360.

Inyo County also suggests that completion of Yucca Mountain will affect tourism in Death Valley National Park and lead to an "anticipated decrease in tourist visits to the region," with resulting effects on hotel room taxes. Petition at 81-82. Again, it provides no evidence for this assertion. This argument is, presumably, based on the logic that visitors will be less likely to come to Inyo County as a result of increased perception of risk or the stigma of a repository at Yucca Mountain. Risk perception and stigma are not effects on the physical environment and therefore do not need to be considered under NEPA. As the Supreme Court held in *Metropolitan Edison Co. v. People Against Nuclear Energy,* 460 U.S. 766, 772 (1983), "NEPA does not

require the agency to assess *every* impact or effect of its proposed action, but only the impact or effect on the environment." The Supreme Court rejected the argument, that NEPA required consideration of psychological health damage that would flow directly from the risk of a nuclear accident, noting that "a *risk* of an accident is not an effect on the physical environment." *Id.* at 775. Here, the contention argues that Yucca Mountain could decrease tourism in Inyo County, impliedly as a result of stigma, and is thus not subject to review under NEPA.[32]

Further, NEPA does not require additional socioeconomic analysis. Under NEPA, socioeconomic impacts need only be analyzed where they are closely related to the environmental impact of a project. *See* 40 C.F.R. § 1508.14 ("economic or social effects are not intended by themselves to require preparation of an environmental impact statement"); *Hammond v. Norton,* 370 F. Supp. 2d 226, 243 (D.C. Cir. 2005), citing *Metro. Edison Co. v. People Against Nuclear Energy,* 460 U.S. 766, 771-72 (1983) (holding that whether impacts on the "human environment" must be addressed depends on "the closeness of the relationship between the change in the environment and the 'effect' at issue"). This is precisely what DOE's internal guidelines recommend. *See* DOE, Memorandum, "NEPA Guidance: Revised Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements," at 18 (Dec. 23, 2004) (recommending that preparers "[c]onsider environmental impacts within geographic boundaries appropriate for each resource reviewed"). Using employment data parallels the scope of many environmental impacts, including new housing and public service demands. Repository SEIS, Vol. I at 3-70 to -74. Moreover, as discussed above, Inyo County has provided no evidence that the alleged potential environmental harms in Inyo

[32] Similarly, Inyo County argues that Yucca Mountain could impact future residential growth and that "quality of life" could be harmed, again with no evidence. Petition at 82-84. This is likewise an argument that individuals will not want to move to Inyo County as a result of perceived stigma, and is therefore not an effect that DOE need analyze under NEPA.

County are "interrelated" to the claimed socioeconomic impacts. 40 C.F.R. § 1508.14. DOE has set appropriate geographic boundaries for the socioeconomic analysis based on the impacts of the project.

Inyo County claims that transportation impacts will lead to a variety of socioeconomic harms, including impacts on schools and local government, as well as property value decreases. Petition at 82-83. Inyo County offers no basis for these allegations. It points to a potential "2.5% to 5% decrease in property values" without so much as citing a source. Petition at 83. In fact, there is no indication that transportation impacts from the Yucca Mountain Project will have any significant effect on Inyo County. DOE has not yet selected its truck routes, noting, "[a]t this time, many years before shipments could begin, it is premature to predict the highway routes or rail lines DOE might use." Repository SEIS, Vol. III at CR-185. Also, DOE clearly demonstrates that it has no plans to use State Route-127 through Death Valley as an overweight truck route.[33]

It is simply too soon to require DOE to evaluate the socioeconomic impacts of specific routes it may use, many years before a possible first shipment. Numerous CEQ regulations stress the need to prepare an EIS early in the process. 40 C.F.R. §§ 1500.5, 1501.2, 1501.5, 1502.5, and 1508.23. NEPA analysis of environmental consequences must be made "as soon as it can reasonably be done." *Kern v. U.S. Bureau of Land Mgmt.,* 284 F.3d 1062, 1072 (9th Cir. 2002) (citing *Save Our Ecosystems v. Clark,* 747 F.2d 1240, 1246 n. 9 (9th Cir. 1984)). Inyo

[33] DOE explains: "The representative truck routes that DOE presented in the Repository SEIS follow U.S. Department of Transportation routing regulations (49 CFR 397, Part D) for highway-route-controlled quantities of radioactive material, which limit shipments to preferred routes such as Interstate Highways and bypasses and beltways around cities. DOE does not intend to use State Route 127 unless the State of California designates it as an alternate preferred route." Repository SEIS, Vol. III at CR-442.

County does not cite a single case in which an environmental impact statement was found invalid because it was prepared too early in the process.

NEPA is first and foremost an environmental statute. *See Ass'n Concerned About Tomorrow, Inc. v. Dole,* 610 F.Supp. 1101, 1111 (N.D. Tex. 1985) (noting that "economic and social impacts clearly occupy a lesser tier of importance in an EIS than do purely environmental or ecological concerns"). Thus, even if NRC finds that DOE in part incorrectly set the socioeconomic region of influence, reviewing courts have found that the mere identification of a deficiency does not necessarily render that EIS "inadequate." Indeed, the D.C. Circuit so held in denying Nevada's challenge to the transportation-related portions of DOE's 2002 FEIS. *Nevada v. Dep't of Energy,* 457 F.3d 78, 93 (D.C. Cir. 2006). There, the court rejected alleged inadequacies in the FEIS relating to environmental impacts on cultural resources, floodplains and archaeological and historic impacts. The court stated that "we do not think that the inadequacies to which Nevada points make the FEIS inadequate" or render DOE's selection of the Caliente Corridor "arbitrary and capricious." *Id.* The D.C. Circuit emphasized that courts "will not 'flyspeck' an agency's environmental analysis, looking for any deficiency no matter how minor." *Id.* (citing *Fuel Safe Wash. v. FERC,* 389 F.3d 1313, 1323 (10th Cir. 2004); *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci,* 857 F.2d 505, 508 (9th Cir. 1988)).

The Commission, for its part, has indicated that this same standard applies in its licensing proceedings. As the Commission explained:

> NEPA's twin goals are to inform the agency and the public about the environmental effects of a project. At NRC licensing hearings, petitioners may raise contentions seeking correction of *significant inaccuracies and omissions* in the [applicant's environmental report (ER) or agency's EIS]. Our boards do not sit to "flyspeck" environmental documents or to add details or nuances. If the ER

> (or EIS) on its face "comes to grips with all important considerations" nothing more need be done.

Sys. Energy Res., Inc. (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005) (quoting *Hydro Res., Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71) (2001) (emphasis added). *See also Duke Energy Corp.* (McGuire Nuclear Station Units 1 and 2, Catawba Nuclear Station), CLI-03-17, 58 NRC 419, 431 (2003) ("NRC adjudicatory hearings are not EIS editing sessions. Our busy boards do not sit to parse and fine-tune EISs.").

Beyond its socioeconomic arguments, Inyo County makes two additional arguments, each of which is without merit. First, it argues that DOE failed to prepare an evacuation plan. Petition at 83. Such a plan is not required. NEPA "does not impose any substantive requirements on federal agencies – it exists to ensure a process." *The Lands Council v. McNair,* 537 F.3d 981, 1000 (9th Cir. 2008) (internal citations and quotations omitted). Inyo County points to no statutory or regulatory requirement under NEPA to prepare an evacuation plan.[34] Second, Inyo County argues that DOE has failed to analyze "cumulative effects." Petition at 81. But the County fails to make even the barest showing of what effects were not significant enough to be considered individually, but are "collectively significant" such that an analysis is required. 40 C.F.R. § 1508.7. It is therefore impossible to respond to this allegation.

e. Statement of Alleged Facts or Expert Opinion Supporting Petitioner's Position and Supporting References

For the reasons discussed above with respect to the requirements of 10 C.F.R. §§ 51.109 and 2.326, and as addressed in Section IV.A.3 regarding the legal standards under 10 C.F.R

[34] DOE also reasonably explained that an evacuation plan is not needed: "DOE studies and models of postclosure performance, as described in Chapter 5 and Appendix F, indicate that impacts [to Inyo County] under even the most severe scenarios would be represented by low quantities and slow increases of radionuclides in the groundwater pathway. DOE's postclosure monitoring would provide early detection of any unusual conditions in the groundwater. As a consequence, there would be ample time to plan corrective measures to protect the public." Repository SEIS, Vol. III at CR-527

§ 2.309(f)(1)(v), Inyo County has failed to provide the requisite supporting facts, expert opinion and references.

f. Existence of a Genuine Dispute on a Material Issue of Law or Fact, With Supporting References to the License Application

For the reasons discussed in sections c. and d. above, there is no genuine dispute on any material issue of law or fact because challenges to DOE's transportation decisions and supporting NEPA analyses are outside the scope of this proceeding, because the contention is time-barred, and because the contention fails to demonstrate any inadequacy in DOE's NEPA analyses. The contention therefore should be rejected.

11. CONTENTION 11 - INY-(JOINT) SAFETY-4 - (NYE–(JOINT) SAFETY-5 FAILURE TO INCLUDE THE REQUIREMENTS OF THE NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS), DATED MARCH 1, 2004, AND RELATED DOCUMENTATION IN SECTION 5.7 EMERGENCY PLANNING OF THE YUCCA MOUNTAIN REPOSITORY SAFETY ANALYSIS REPORT (SAR).

The applicant failed to include key interoperability and standardized procedure and terminology requirements of the National Incident Management System (NIMS), in the Emergency Planning required as part of the Safety Analysis Report [Yucca Mountain Repository License Application, General Information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR Section 5.7; SAR pp 5.7-1 to 5.7-55). LSN DEN001592183] to sufficiently ensure the ability of Nye County and other offsite agencies to properly plan and respond to onsite emergency actions. See requirements at 10 CFR 63.161 and 10 CFR 72.32(b).

RESPONSE

This contention is jointly sponsored by Nye, Churchill, Esmeralda, Lander, Mineral, and Inyo County. Nye County has stated that it will be the lead party with respect to these joint contentions. Nye County Petition at 2. DOE has demonstrated why this jointly-sponsored contention is not admissible in its Answer to Nye County's Petition to Intervene. Accordingly, DOE is not repeating its response here, and respectfully refers the Board to its response in the Answer to Nye County's Petition.

12. CONTENTION 12 - INY- (JOINT) SAFETY-5 - (NYE-(JOINT) SAFETY-6) THE LA LACKS ANY JUSTIFICATION OR BASIS FOR EXCLUDING POTENTIAL AIRCRAFT CRASHES AS A CATEGORY 2 EVENT SEQUENCE.

Contrary to the requirements of 10 CFR 63 to provide the technical basis for the inclusion or exclusion of specific human-induced hazards in the repository preclosure safety analysis, the Department of Energy (DOE) has merely assumed the U.S. Air Force (USAF) will restrict their activities in the repository vicinity. No basis or justification for that assumption is provided by DOE in its repository License Application (LA) or supporting documents.

RESPONSE

This contention is jointly sponsored by Nye, Churchill, Esmeralda, Lander, Mineral, and Inyo County. Nye County has stated that it will be the lead party with respect to these joint contentions. Nye County Petition at 2. DOE has demonstrated why this jointly-sponsored contention is not admissible in its Answer to Nye County's Petition to Intervene. Accordingly, DOE is not repeating its response here, and respectfully refers the Board to its response in the Answer to Nye County's Petition.

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V. CONCLUSION

Inyo County has not demonstrated that it is in substantial and timely compliance with its LSN obligations. DOE has no objection to Inyo County's legal standing as an Affected Unit of Local Government. However, DOE does not believe that Inyo County has proffered any admissible contentions. Therefore, its Petition should be denied.

Respectfully submitted,

Signed electronically by Donald J. Silverman

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Dated in Washington, D.C.
this 15th day of January 2009.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	January 15, 2009
U.S. Department of Energy	)	
	)	
(License Application for Geologic Repository at Yucca Mountain)	)	Docket No. 63-001

CERTIFICATE OF SERVICE

I hereby certify that copies of the "**ANSWER OF THE U.S. DEPARTMENT OF ENERGY TO PETITION FOR LEAVE TO INTERVENE BY THE COUNTY OF INYO, CALIFORNIA ON AN APPLICATION BY THE U.S. DEPARTMENT OF ENERGY FOR AUTHORITY TO CONSTRUCT A GEOLOGIC HIGH-LEVEL WASTE REPOSITORY AT A GEOLOGIC REPOSITORY OPERATIONS AREA AT YUCCA MOUNTAIN NEVADA"** have been served on the following persons this 15th day of January, 2009 by the Nuclear Regulatory Commission's Electronic Information Exchange.

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