

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD**

**09-892-HLW-CAB04
Thomas S. Moore, Chairman
Paul S. Ryerson
Richard E. Wardwell**

| | | |
|---|---|-------------------|
| In the Matter of: |) | August 17, 2009 |
| |) | |
| U.S. Department of Energy |) | |
| |) | Docket No. 63-001 |
| (High Level Waste Repository |) | |
| Construction Authorization Application) |) | |
| |) | |

**JOINT RESPONSE TO JULY 21, 2009 ORDER
(CONCERNING SERIAL CASE MANAGEMENT)**

On July 21, 2009, Construction Authorization Board #4 (CAB 04) issued an Order directing, among other things, that the parties consult and seek agreement on responses to six questions related to serial case management. The parties have consulted and are submitting this Joint Response to the Board's six questions.

BOARD QUESTION 1: WHICH ADMITTED CONTENTIONS ARE ASSOCIATED WITH EACH OF THE FIVE PROPOSED VOLUMES OF THE SER?

The parties have prepared the attached spreadsheet ("Spreadsheet 1") that categorizes all of the admitted safety and miscellaneous contentions by SER volume.

The breakdown is as follows:

| | |
|--------------|-----------------|
| SER Volume 1 | 1 contention |
| SER Volume 2 | 41 contentions |
| SER Volume 3 | 154 contentions |
| SER Volume 4 | 28 contentions |
| SER Volume 5 | 1 contention |

None of the admitted environmental contentions is “associated” with an SER volume; however, some of the admitted environmental contentions may have “a safety component” as identified in the response to Board Question 4 below.

Clark County disagrees with the SER Volume designation for one contention. It is Clark County’s position that CLK-SAFETY-2 should be categorized with both SER Volume 2 (pre-closure) and 3 (post-closure). Clark County believes that this admitted contention asserts there are no final and definitive assurances or evidence that ground-to-ground missile testing at the Nevada Test Site will never again be conducted and never again pose a threat during the pre- or post-closure periods. Thus, Clark County agrees that the correlation to SER volume 2 (pre-closure) in Spreadsheet #1 is appropriate. However, it is Clark County's view that the contention also alleges non-compliance with 63.113 and 63.114, pertaining to performance objectives for the repository after permanent closure. Thus, Clark County believes that this contention also correlates to SER Volume 3 (post-closure).

The State of Nevada disagrees with the SER Volume designation for about 25 contentions, as indicated in Spreadsheet 1, and will be filing its own differing views in accordance with the Board's July 21st Order. For those contentions where there appears

to be a disagreement, Spreadsheet 1 provides a rationale for the SER Volume designation listed in the Spreadsheet.

BOARD QUESTION 2: SEPARATELY, WHICH ADMITTED LEGAL ISSUE CONTENTIONS, AS IDENTIFIED IN THE CONSTRUCTION AUTHORIZATION BOARDS' MAY 11, 2009 MEMORANDUM AND ORDER, ARE ASSOCIATED WITH EACH OF THE FIVE PROPOSED VOLUMES OF THE SER?

The parties have prepared the attached spreadsheet (“Spreadsheet 2”) that categorizes all of the admitted “legal” safety and miscellaneous contentions by SER volume. In addition to the contentions that the CABs identified as “legal” in nature (*i.e.*, susceptible to resolution through briefing as identified in LBP-09-06), the parties have included in the spreadsheet the additional contentions that the Commission identified as “legal” in CLI-09-14, in whole or in part, as well as other contentions that the parties now believe may be handled by legal briefing, in whole or in part.¹ Column 3 of Spreadsheet 2 identifies whether the legal designation was made by the Board, the Commission, or the parties.²

Prior to the conference in September, the parties will consult and attempt to seek agreement on the specific legal issues that need to be briefed for the contentions listed in Spreadsheet 2. The parties will also consult and attempt to seek agreement on a briefing schedule. The parties will endeavor to submit the list of specific legal issues and the

¹ DOE and Nevada disagree whether NEV-SAFETY-199 and -200 should be designated as a “legal issue” contention. DOE believes they should be briefed on the legal issue of whether 10 C.F.R. § 63.305(b) applies at all to the Performance Confirmation Program.

² The Board identified CAL-NEPA-05 as a “legal issue” contention in LBP-09-06. However, the parties have interpreted Board Question 2 to be limited to safety and miscellaneous contentions. In addition, the parties do not believe this contention has a safety component associated with any SER Volume. Therefore, the parties have not included CAL-NEPA-05 on Spreadsheet #2.

briefing schedule, including any areas of disagreement, to the Board by September 11, 2009, so that the plans for legal briefing can be discussed at the Board's conference the following week. The parties would then request that the Board set a briefing schedule for these contentions that does not depend on the NRC Staff's schedule for issuing SER volumes or the Board's schedule for adjudicating NEPA contentions, and that calls for briefs to be filed this Fall.³

It is in the parties' interests, from a resource perspective, to move forward with briefing these contentions as early as practicable; however, the parties also believe that not all legal contentions should be briefed at the same time. The parties will work towards generating a schedule for the filing of initial briefs followed by filing of reply briefs, with the understanding that related contentions be addressed in a single set of briefs where appropriate (*e.g.*, land and water rights-related contentions).

BOARD QUESTION 3: AS TO EACH ADMITTED LEGAL ISSUE CONTENTION, WHAT OTHER ADMITTED SAFETY, NEPA OR MISCELLANEOUS CONTENTIONS MIGHT POTENTIALLY BE RESOLVED ON THE BASIS OF HOW THAT LEGAL ISSUE CONTENTION IS DECIDED?

At this time the parties have not identified any such contentions, but may do so at a later date. The parties recommend that the Board, after it rules upon the legal issue contentions, set a schedule that allows the parties to file summary disposition motions on any contentions the parties then believe can be resolved on the basis of how the Board

³ See *U.S. Department of Energy* (High Level Waste Repository), CLI-09-14, __ NRC __, slip op. at 14 (2009) (“In the interest of moving forward expeditiously where possible in this proceeding, we emphasize that the Boards should be prompt in issuing an appropriately efficient briefing schedule for these contentions”).

decided the legal issue contentions. Such summary disposition motions should be filed serially within a defined window of time consistent with the overall hearing schedule.

BOARD QUESTION 4: WHICH ADMITTED NEPA CONTENTIONS HAVE NO SAFETY COMPONENT, SUCH THAT THEY COULD EFFICIENTLY AND APPROPRIATELY BE ADJUDICATED WITHOUT REGARD TO THE STATUS OF THE SER OR ANY SIMILAR SAFETY-RELATED CONTENTION?

The parties have prepared the attached spreadsheet (“Spreadsheet 3”) that, among other things, identifies those NEPA contentions that the parties believe do not have a “safety component.” In column 4 of Spreadsheet 3, the words “No SER Volume/Not Groundwater,” identifies the NEPA contentions that do *not* involve a “safety component.”

BOARD QUESTION 5: WHICH, IF ANY, ADMITTED NEPA CONTENTIONS (IN ADDITION TO NYE-NEPA-001) INVOLVE MATTERS THAT ARE THE SUBJECT OF PENDING SUPPLEMENTATION OF DOE’S ENVIRONMENTAL IMPACT STATEMENT CONCERNING THE PROPOSED REPOSITORY?

The information provided in Spreadsheet 3, column 4, responds to this question. The contentions that relate to the NEPA groundwater impacts issues identified in the NRC Staff’s September 5, 2008 Adoption Determination are designated in column 4 as “Groundwater.”

BOARD QUESTION 6: WHICH, IF ANY, CONTENTIONS IDENTIFIED IN RESPONSE TO QUESTION 4, BUT NOT IN RESPONSE TO QUESTION 5, REQUIRE DISCOVERY BEFORE BEING RIPE FOR ADJUDICATION? DESCRIBE THE GENERAL NATURE OF ANY SUCH DISCOVERY.

The information provided in Spreadsheet 3, column 5, responds to this question. There is no discussion of discovery with respect to the NEPA groundwater contentions because they are excluded from this answer by the terms of Board Question 6.

The Board also asked the parties to describe the general nature of any such discovery. The parties expect that discovery for any particular contention—where discovery is needed—may include document production, depositions, and requests for admissions, so column 5 simply states “Yes” or “No” as to whether the parties believe that the NEPA contention will require discovery before being ripe for hearing.

Nye County believes that many of the NEPA contentions are erroneously listed on Spreadsheet 3 as “needing discovery” in response to Board Question 6, particularly those contentions involving transportation issues. Nye County believes that such contentions and others, are wholly, or in part, subject to possible resolution on the basis of threshold legal issues and arguments. Therefore, Nye County asserts that the NEPA legal issues preliminarily addressed by the CABs' May 11, 2009 Memorandum and Order in the context of contention admissibility should now be scheduled for full briefing, and adjudication of those issues, before embarking on costly and time-consuming discovery relative to those contentions.

JTS believes that at least four of its contentions, JTS-NEPA-001, JTS-NEPA-007, JTS-NEPA-008, and JTS-NEPA-009, potentially fall within two categories of the SER,

volumes 3 and 4. Volume 4 of the SER will address, among other things, Native American cultural activities. (See NRC Staff Answer to the CAB's July 21, 2009 Order Concerning Serial Case Management, identifying Vol. 4 of the SER as addressing SAR Chapter 5, sections 5.1-5.9.). JTS agrees that its contentions falling within more than one SER do, in fact, address NEPA issues, and may be categorized as falling within Volume 3 of the SER as identified on Spreadsheet 3. JTS also believes that discovery of and a hearing on its contentions that involve Native American cultural activities should not proceed until the NRC Staff issues SER volume 4. JTS therefore preserves its rights with respect to discovery of or a hearing on such contentions, notwithstanding the listing of those same contentions on Spreadsheet 3.

Also, DOE and California are in the process of discussions that they hope will result in a joint motion to the Board seeking the deferral of litigation, including discovery, of most of the NEPA contentions. Under the proposed agreement, those NEPA contentions that also contain safety issues—approximately 25 contentions—would not be deferred, but would be litigated with the safety issues related to the respective volume of the SER.

Finally, at least one counsel for each party is available to support a prehearing conference in the Las Vegas Hearing Facility on Monday, September 14 and/or Tuesday, September 15.

Respectfully submitted,

Signed (electronically) by Alex S. Polonsky

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Dated in Washington, DC
this 17th day of August 2009

James Bennett McRae

Martha S. Crosland

U.S. Department of Energy

Office of the General Counsel

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Washington, DC 20585

Spreadsheet # 1
Answer to
Board Question 1
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume |
|-------------------------|--|--------------------------|
| NEV-SAFETY-196 | Description of Security Measures | 1 |
| 4NC-SAFETY-001 | Insufficient analysis in the License Application and SAR of transportation container usage and correlating impacts on worker safety | 2 |
| CLK-SAFETY-002 | The DOE's Failure to Analyze Missile Testing | 2 |
| INY-JOINT-SAFETY-0 | The LA Lacks any Justification or Basis for Excluding Potential Aircraft Crashes as a Category 2 Event Sequence | 2 |
| NEI-SAFETY-001 | Spent Nuclear Fuel Direct Disposal in Dual Purpose Canisters | 2 |
| NEI-SAFETY-002 | Insufficient Number of Non-TAD SNF Shipments to Yucca Mountain | 2 |
| NEI-SAFETY-003 | Excessive Seismic Design of Aging Facility | 2 |
| NEV-MISC-002 | Alternate Waste Storage Plans | 2 |
| NEV-MISC-004 | Aging Facility Role under NWPA | 2 |
| NEV-MISC-005 | Role of Aging Facility | 2 |
| NEV-SAFETY-008 | ALARA and the Aging Facility | 2 |
| NEV-SAFETY-110 | Rock Bolt Corrosion [Rationale for Volume 2: The contention is focused on rock bolt corrosion during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-123 | Durability of Ground Support [Rationale for Volume 2: The contention is focused on rock bolt corrosion during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-128 | Nuclear Code and Fabrication Quality Assurance Standards [Rationale for Volume 2: The contention emphasizes an alleged lack of detail in the codes and standards and fabrication approaches necessary to design and fabricate the drip shield during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-130 | Drip Shield Emplacement Plan, Equipment, and Schedule [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the ability to emplace drip shields during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-131 | Rock Debris Removal [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the ability to handle off-normal conditions thereby preventing placement of the drip shields during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-132 | TEV Description [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the TEV to emplace waste packages during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-133 | Drip Shield Gantry Description [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the drip shield emplacement gantry to emplace drip shields during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-134 | Retrieval or Alternate Storage Description [Rationale for Volume 2: The contention emphasizes an alleged lack of detail in the demonstration of the capability to perform retrieval under off-normal conditions. Retrieval is an operation performed during preclosure and is not related to the postclosure results.] | 2 (Nevada says 3) |
| NEV-SAFETY-137 | Construction of the Emplacement Drifts [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the construction TBM to successfully develop emplacement drifts during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-138 | Description of the Ventilation System for the Repository Options Made in the TSPA-LA Regarding Waste Isolation [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the subsurface ventilation and associated instrumentation to function properly in emplacement drifts during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-140 | Engineered Barrier System Design Basis [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the subsurface systems to function properly during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-141 | Ground Support Descriptions [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the ground support components to function properly in the emplacement drifts during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-145 | Drip Shield Specifications [Rationale for Volume 2: The contention emphasizes an alleged lack of detail in the codes and standards and fabrication approaches necessary to design and fabricate the drip shield during the preclosure period.] | 2 (Nevada says 3) |

Spreadsheet # 1
Answer to
Board Question 1
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| Contention Label | Contention Name | SER Volume |
|----------------------|--|-------------------|
| NEV-SAFETY-146 | Reliance on Preliminary or Conceptual Design Information [Rationale for Volume 2: Nevada identifies the contention as a legal issue in its Petition to Intervene, and lists 19 design sections of the SAR and only one postclosure subsection of the SAR. The contention claims that the design of structures, systems, and components is preliminary or conceptual. Accordingly, this legal issue contention is more appropriately associated with SER Volume 2.] | 2 (Nevada says 3) |
| NEV-SAFETY-162 | Drip Shield Installation Schedule [Rationale for Volume 2: The contention is focused on rock bolt corrosion during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-168 | Retrieval Practicality [Rationale for Volume 2: The contention emphasizes an alleged lack of detail in the demonstration of the capability to perform retrieval. Retrieval is an operation performed during preclosure and is not related to the postclosure results.] | 2 (Nevada says 3) |
| NEV-SAFETY-169 | Deferred Retrieval Plans [Rationale for Volume 2: Nevada identifies this contention as a legal issue in its Petition to Intervene, and asserts that the description of the plans for retrieval are inadequate and do not present the plans themselves. Retrieval occurs during preclosure. Accordingly, this legal issue contention is more appropriately associated with SER Volume 2.] | 2 (Nevada says 3) |
| NEV-SAFETY-173 | Emplacement Drift Monitoring [Rationale for Volume 2: The contention emphasizes an alleged lack of demonstration of the subsurface instrumentation to function properly in the emplacement drifts during the preclosure period.] | 2 (Nevada says 3) |
| NEV-SAFETY-174 | Controls and Restrictions | 2 |
| NEV-SAFETY-175 | Controls on Pilot Relief | 2 |
| NEV-SAFETY-176 | Controls on Pilot Maneuvering | 2 |
| NEV-SAFETY-177 | Controls on Helicopters | 2 |
| NEV-SAFETY-178 | Basis for Aircraft Exclusions | 2 |
| NEV-SAFETY-179 | Controls on Aircraft Operations (Mid-Air) | 2 |
| NEV-SAFETY-180 | Crash Frequency of Fixed-Wing Aircraft | 2 |
| NEV-SAFETY-181 | Basis for Crash Density Calculations | 2 |
| NEV-SAFETY-182 | Glide Distance | 2 |
| NEV-SAFETY-183 | Crash Rates | 2 |
| NEV-SAFETY-201 | Reliance on Preliminary or Conceptual Design Information | 2 |
| NYE-JOINT SAFETY-006 | The LA lacks any justification or basis for excluding potential aircraft crashes as a category 2 event sequence | 2 |
| NYE-SAFETY-004 | Failure to fully consider possible air quality and radiological changes due to pre-closure construction and operational activity | 2 |
| CLK-SAFETY-003 | The DOE Miscalculates Basaltic Magma Melting Depth | 3 |
| CLK-SAFETY-004 | The DOE Ignores the Time Span of Basaltic Volcanism | 3 |
| CLK-SAFETY-005 | The DOE Improperly Focuses on Upper Crustal Extension Patterns | 3 |
| CLK-SAFETY-006 | The DOE Improperly Excludes the Death Valley Volcanic Field and Greenwater Range from Volcanism Calculations | 3 |
| CLK-SAFETY-007 | The DOE Improperly Estimates Igneous Event Probability for 10,000 Years and 1,000,000 Years | 3 |
| CLK-SAFETY-008 | The DOE Ignores 11-Million Year Volcanism Data and Instead Relies on Only 5-Million Year Volcanism Data | 3 |
| CLK-SAFETY-009 | The DOE Fails to Consider Alternative Igneous Event Conceptual Models | 3 |
| CLK-SAFETY-010 | The DOE Ignores Igneous Event Data Evaluated Since 1996 in the Total System Performance Analysis | 3 |
| CLK-SAFETY-011 | The DOE Lacks Sufficient Geophysical Data to Support Its Volcanic Model | 3 |
| INY-SAFETY-001 | 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 | 3 |
| INY-SAFETY-002 | 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 | 3 |
| INY-SAFETY-003 | Failure to Adequately Describe and Analyze the Volcanic Field in the Greenwater Range in and Adjacent to Death Valley National Park | 3 |
| NEI-SAFETY-005 | Excessive Conservatism in the Postclosure Criticality Analysis | 3 |
| NEI-SAFETY-006 | Drip Shields Are Not Necessary | 3 |

Spreadsheet # 1
Answer to
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| Contention Label | Contention Name | SER Volume |
|-------------------------|--|-------------------|
| NEV-SAFETY-009 | Increasing CO2 Levels on Future Climate Projections | 3 |
| NEV-SAFETY-010 | Consideration of Forcing Functions on Future Climate Projections | 3 |
| NEV-SAFETY-011 | Human-Induced Climate Changes on Prediction of the Next Glacial Period | 3 |
| NEV-SAFETY-012 | Projections of Future Wetter Climate Conditions | 3 |
| NEV-SAFETY-013 | Future Climate Projections Need to Include Extreme Precipitation Events | 3 |
| NEV-SAFETY-014 | Precipitation Model | 3 |
| NEV-SAFETY-015 | Alternative Precipitation Models and Weather Variables | 3 |
| NEV-SAFETY-016 | Qualification of Climate and Infiltration Models | 3 |
| NEV-SAFETY-017 | Calibration and Simulation of Precipitation Model | 3 |
| NEV-SAFETY-018 | Use of Climate Data from the Analog Sites | 3 |
| NEV-SAFETY-019 | Future Infiltration Projections Need to Include Reduced Vegetation Cover | 3 |
| NEV-SAFETY-020 | Net Infiltration Alternative Conceptual Model | 3 |
| NEV-SAFETY-021 | Infiltration Model and Changes in Soil and Rock Properties | 3 |
| NEV-SAFETY-022 | Net Infiltration Model Water Balance | 3 |
| NEV-SAFETY-023 | Evaluation of Alternative Net Infiltration Models | 3 |
| NEV-SAFETY-024 | Precipitation Data in Net Infiltration Model | 3 |
| NEV-SAFETY-025 | Site-Specific Data in Net Infiltration Model | 3 |
| NEV-SAFETY-026 | Soil Properties Data in Net Infiltration Model | 3 |
| NEV-SAFETY-027 | Rock Properties Data in Net Infiltration Model | 3 |
| NEV-SAFETY-028 | Net Infiltration Model Rock Properties Uncertainty Analysis | 3 |
| NEV-SAFETY-029 | Spatial Variability of Soils and Vegetation in Net Infiltration Model | 3 |
| NEV-SAFETY-030 | Temporal Variability in Precipitation in Net Infiltration Model | 3 |
| NEV-SAFETY-031 | Calibration of Net Infiltration Model | 3 |
| NEV-SAFETY-032 | Use of Initial Conditions in Net Infiltration Model | 3 |
| NEV-SAFETY-033 | Approach to Estimating Percolation | 3 |
| NEV-SAFETY-034 | Representation of Storm Duration for Net Infiltration Modeling | 3 |
| NEV-SAFETY-035 | Episodic Nature of Infiltration Fluxes in Net Infiltration Analysis | 3 |
| NEV-SAFETY-036 | Corroboration of Model Results in Post-Model Validation of Net Infiltration Simulations | 3 |
| NEV-SAFETY-037 | Net Infiltration Model Methodology | 3 |
| NEV-SAFETY-038 | Parameter Correlations in Net Infiltration Model | 3 |
| NEV-SAFETY-039 | Temperature Lapse Rate Verification | 3 |
| NEV-SAFETY-040 | Parameter Uncertainty Treatment in Net Infiltration Model | 3 |
| NEV-SAFETY-041 | Erosion FEP Screening | 3 |
| NEV-SAFETY-042 | Validation of Unsaturated Zone Flow Model by Simulation of Natural Chloride Distribution in Pore Waters | 3 |
| NEV-SAFETY-043 | Validation of Unsaturated Zone Flow Model by Carbon-14 Contents, Strontium Isotope Compositions and Calcite Mineral Precipitate Abundances | 3 |
| NEV-SAFETY-044 | Flow in the Unsaturated Zone from Episodic Infiltration | 3 |
| NEV-SAFETY-045 | Effects of Episodic Flow | 3 |
| NEV-SAFETY-046 | Extreme Events Undefined | 3 |
| NEV-SAFETY-047 | Physical Basis of Site Scale Unsaturated Zone Flow | 3 |
| NEV-SAFETY-048 | Multi-Scale Thermal-Hydrologic Model | 3 |
| NEV-SAFETY-049 | Models of Fluid Movement in the Unsaturated Zone | 3 |
| NEV-SAFETY-050 | Alternative Discrete Fracture Flow Models | 3 |
| NEV-SAFETY-051 | Potential Convective Self Organization of 2-Phase Flow | 3 |
| NEV-SAFETY-052 | EBS and Near-Field Modeling Approach | 3 |
| NEV-SAFETY-053 | Application of the Fracture Matrix Dual Continuum Model to All Unsaturated Zone Flow Processes | 3 |
| NEV-SAFETY-054 | Constitutive Relationships in the Yucca Mountain Infiltration, Thermo-Hydrologic, and TSPA Models | 3 |
| NEV-SAFETY-055 | Data for the Chemistry of Pore Waters in the Topopah Springs (TSw) Formation | 3 |
| NEV-SAFETY-056 | Geochemical Interactions and Evolution in the Unsaturated Zone, Including Thermo-Chemical Alteration of TSw Host Rock | 3 |
| NEV-SAFETY-057 | Data for Near-Field Chemistry Models | 3 |
| NEV-SAFETY-058 | Groundwater Samples in the Unsaturated Zone Sorption Tests | 3 |
| NEV-SAFETY-059 | Groundwater Compositions Assumed | 3 |
| NEV-SAFETY-060 | Empirical Site-Specific Data and the Near-Field Chemistry Model | 3 |
| NEV-SAFETY-061 | Ambient Seepage into Emplacement Drifts | 3 |
| NEV-SAFETY-062 | Thermal Seepage into Emplacement Drifts | 3 |

Spreadsheet # 1
Answer to
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| Contention Label | Contention Name | SER Volume |
|-------------------------|--|-------------------|
| NEV-SAFETY-063 | Effect of Rock Bolts on Ambient Seepage | 3 |
| NEV-SAFETY-064 | Effect of Rock Bolts on Thermal Seepage | 3 |
| NEV-SAFETY-065 | Structural Control of Seepage in the Emplacement Drift | 3 |
| NEV-SAFETY-066 | Attenuation of Seepage into Naturally Fractured Drift Walls | 3 |
| NEV-SAFETY-067 | Evaluation of Uncertainties in Estimated Chemical Properties, Especially pH Values, of Evaporated Drift Brines | 3 |
| NEV-SAFETY-068 | In-Drift Condensation on Mineral Dust | 3 |
| NEV-SAFETY-069 | Coupled Seepage and Dust Deliquescence | 3 |
| NEV-SAFETY-070 | THC Evolution of Near-Field Pre-Seepage Unsaturated Zone Water | 3 |
| NEV-SAFETY-071 | Microbially Induced Water Chemistry Changes in the Incubator Zone | 3 |
| NEV-SAFETY-072 | Characterization of Dust Sources | 3 |
| NEV-SAFETY-073 | In-Drift Organic Contribution by Ventilation or Unsaturated Zone Water | 3 |
| NEV-SAFETY-074 | Impact of Microbial Activity | 3 |
| NEV-SAFETY-075 | Microbially Influenced Corrosion Model | 3 |
| NEV-SAFETY-076 | Microbial Denitrification | 3 |
| NEV-SAFETY-077 | Corrosion from Rock Bolt Seepage | 3 |
| NEV-SAFETY-078 | Static Corrosion Tests on Alloy 22 | 3 |
| NEV-SAFETY-079 | Static General Corrosion Test Solutions | 3 |
| NEV-SAFETY-080 | Localized Corrosion, Chloride Bearing Mineral Deposits and Hot Wall Effects | 3 |
| NEV-SAFETY-081 | Hydrogen Uptake Resulting From General Corrosion | 3 |
| NEV-SAFETY-082 | Corrosion of Thermally Oxidized Titanium | 3 |
| NEV-SAFETY-083 | Adequacy of Methods of General and Localized Corrosion Testing of the Drip Shield | 3 |
| NEV-SAFETY-084 | Use of Differential Weight Loss to Estimate Very Low Corrosion Rates | 3 |
| NEV-SAFETY-085 | Declining Corrosion Rate over Time | 3 |
| NEV-SAFETY-086 | Role of Rock Dust on Canister Surfaces in Localized Corrosion | 3 |
| NEV-SAFETY-087 | Intergranular SCC Corrosion During Dry-Wet Cycle | 3 |
| NEV-SAFETY-088 | Thermodynamics of Complex Deliquescent Salt Reactions During C-22 Corrosion | 3 |
| NEV-SAFETY-089 | Inhibition of C-22 Corrosion by High Nitrate to Chloride Ratio | 3 |
| NEV-SAFETY-090 | Effects of Rock Bolt on C-22 and Ti-7 Corrosion Reactions | 3 |
| NEV-SAFETY-091 | Representativeness of C-22 and Ti-7 Corrosion Testing Methods | 3 |
| NEV-SAFETY-092 | Impacts of Fluoride Due to Breach of HLW Containers | 3 |
| NEV-SAFETY-093 | Natural Lead Reactions on C-22 | 3 |
| NEV-SAFETY-094 | Significance of Mineral Crusts in C-22 Corrosion | 3 |
| NEV-SAFETY-095 | Peak Thermal Period Seepage and Corrosion | 3 |
| NEV-SAFETY-096 | Salt Production and C-22 Corrosion Due to Heat-Pipe Conditions | 3 |
| NEV-SAFETY-097 | Crevice Corrosion on C-22 Due to Drip Shield Corrosion Debris | 3 |
| NEV-SAFETY-098 | Rate of Drip Shield Interconnection Corrosion | 3 |
| NEV-SAFETY-099 | Boric Acid Production from HLW Dissolution | 3 |
| NEV-SAFETY-100 | Ground Support Components and In-Drift Modeling | 3 |
| NEV-SAFETY-101 | Sulfur Accumulation at the Metal-Passive Film Interface | 3 |
| NEV-SAFETY-102 | Sulfur Accumulation and Localized Corrosion | 3 |
| NEV-SAFETY-103 | Sulfur Accumulation and Stress Corrosion Initiation | 3 |
| NEV-SAFETY-104 | Sulfur Accumulation and Stress Corrosion Propagation | 3 |
| NEV-SAFETY-105 | Drip Shield Corrosion Environment | 3 |
| NEV-SAFETY-106 | Waste Container Corrosion Environment | 3 |
| NEV-SAFETY-107 | Electrochemical Reduction of Nitrate | 3 |
| NEV-SAFETY-108 | Molten Salt Corrosion of the Canister | 3 |
| NEV-SAFETY-109 | Molten Salt Corrosion of the Drip Shield | 3 |
| NEV-SAFETY-111 | HLW Waste Glass Dissolution | 3 |
| NEV-SAFETY-112 | HLW Waste Glass Degradation | 3 |
| NEV-SAFETY-113 | Competitive Sorption in the Unsaturated Zone | 3 |
| NEV-SAFETY-114 | Applicability of Sorption Data | 3 |
| NEV-SAFETY-115 | Matrix Diffusion | 3 |
| NEV-SAFETY-116 | Saturated Zone Redox Conditions | 3 |
| NEV-SAFETY-117 | Radionuclide Sorption in the Saturated Zone | 3 |
| NEV-SAFETY-118 | Estimation of Uncertainties in Soil-to-Plant Transfer Factors | 3 |
| NEV-SAFETY-119 | Estimation of Uncertainties in Animal Product Transfer Coefficients | 3 |
| NEV-SAFETY-120 | RMEI Diet | 3 |
| NEV-SAFETY-121 | Host Rock Geomechanical Properties | 3 |

Spreadsheet # 1
Answer to
Board Question 1
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume |
|-------------------------|---|--------------------------|
| NEV-SAFETY-122 | Screening of Drift Degradation FEPs | 3 |
| NEV-SAFETY-124 | Welding of Alpha Beta Titanium Alloy to Unalloyed titanium | 3 |
| NEV-SAFETY-125 | Effectiveness of Stress Relief to Eliminate SCC or Hydrogen Effects | 3 |
| NEV-SAFETY-126 | Properties of Dissimilar Metal Weld Joints between Grade 29 and Grade 7 Titanium | 3 |
| NEV-SAFETY-127 | Hydrogen and Erti-28 Filler Metal for Welded Joints Between Grade 29 and Grade 7 Titanium | 3 |
| NEV-SAFETY-129 | Early Failure Mechanisms Associated with Titanium Fabrication | 3 |
| NEV-SAFETY-136 | Phased Ground Support Installation | 3 |
| NEV-SAFETY-142 | Standard Titanium Grades Considered | 3 |
| NEV-SAFETY-143 | Available Drip Shield Design Information | 3 |
| NEV-SAFETY-144 | Drip Shield Failure Mechanisms | 3 |
| NEV-SAFETY-147 | Evaluation of Data Used in Drip Shield Failure Probability | 3 |
| NEV-SAFETY-148 | Evaluation of Computational Procedure Used in Drip Shield Failure Probability | 3 |
| NEV-SAFETY-149 | Deviations in Design and Waste Emplacement | 3 |
| NEV-SAFETY-150 | Basaltic Magma Melting Depth | 3 |
| NEV-SAFETY-151 | Time Span of Basaltic Volcanism | 3 |
| NEV-SAFETY-152 | Focus on Upper Crustal Extension Patterns | 3 |
| NEV-SAFETY-153 | Exclusion of Death Valley from Volcanism Calculations | 3 |
| NEV-SAFETY-154 | Igneous Event Probability for 10,000 Years and 1,000,000 Years | 3 |
| NEV-SAFETY-155 | 11-Million Year vs. 5-Million Year Volcanism Data | 3 |
| NEV-SAFETY-156 | Alternative Igneous Event Conceptual Models | 3 |
| NEV-SAFETY-157 | Igneous Event Data in the TSPA | 3 |
| NEV-SAFETY-158 | Geophysical Data in DOE's Volcanic Model | 3 |
| NEV-SAFETY-159 | Propagation of Conceptual and Parametric Uncertainties through the Safety Assessment | 3 |
| NEV-SAFETY-160 | Probability Density Functions Used in the TSPA | 3 |
| NEV-SAFETY-161 | Critical Role of Drip Shield | 3 |
| NEV-SAFETY-163 | Screening of Near-Field Criticality | 3 |
| NEV-SAFETY-170 | Conservatisms and the PMA | 3 |
| NEV-SAFETY-171 | PMA and QA | 3 |
| NCA-MISC-001 | Land Ownership and Control | 4 |
| NEV-SAFETY-003 | Quality Assurance Implementation | 4 |
| NEV-SAFETY-004 | Content of Quality Assurance Program | 4 |
| NEV-SAFETY-005 | Emergency Plan | 4 |
| NEV-SAFETY-006 | Part 21 Compliance | 4 |
| NEV-SAFETY-007 | Retrieval Plans and QA | 4 |
| NEV-SAFETY-139 | Description of Reasonable Emergencies [Rationale for Volume 4: The contention emphasizes the lack of emergency planing, which will be discussed in SER Volume 4]. | 4 (Nevada says 3) |
| NEV-SAFETY-164 | Aggregation of Probability Distributions [Rationale for Volume 4: The subject of this contention is DOE's expert elicitation process and its reliance on one method for aggregating probability distributions from groups of experts. The expert elicitation process will be discussed in SER Volume 4]. | 4 (Nevada says 3) |
| NEV-SAFETY-165 | Saturated Zone Expert Elicitation [Rationale for Volume 4: The subject of this contention is the expert elicitation process and DOE's use of a NUREG-1804. The expert elicitation process will be discussed in SER Volume 4]. | 4 (Nevada says 3) |
| NEV-SAFETY-166 | Probabilistic Seismic Hazard Analysis Expert Elicitation [Rationale for Volume 4: same as NEV-SAFETY-165] | 4 (Nevada says 3) |
| NEV-SAFETY-167 | Probabilistic Volcanic Hazard Analysis Expert Elicitation [Rationale for Volume 4: same as NEV-SAFETY-165] | 4 (Nevada says 3) |
| NEV-SAFETY-172 | Inspection and Verification of TAD [Rationale for Volume 4: The focus of this contention is on DOE's Quality Assurance Program, which will be discussed in SER Volume 4]. | 4 (Nevada says 3) |
| NEV-SAFETY-184 | Right-of-Way N-48602 | 4 |
| NEV-SAFETY-185 | Right-of-Way N-47748 | 4 |
| NEV-SAFETY-186 | Ranch Boundary Land | 4 |
| NEV-SAFETY-187 | Public Land Order 7653 | 4 |
| NEV-SAFETY-188 | Public Land Order 6802/7534 | 4 |
| NEV-SAFETY-189 | Patent 27-83-002 | 4 |

Spreadsheet # 1
Answer to
Board Question 1
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume |
|-------------------------|--|-------------------|
| NEV-SAFETY-190 | Unpatented Lode and Placer Mining Claims | 4 |
| NEV-SAFETY-191 | Nye County Monitoring Wells | 4 |
| NEV-SAFETY-192 | Land Outside DOE's Rights-Of-Way | 4 |
| NEV-SAFETY-193 | Land Withdrawal | 4 |
| NEV-SAFETY-194 | VH-1 Water Rights | 4 |
| NEV-SAFETY-199 | Performance Confirmation and Available Technology | 4 |
| NEV-SAFETY-200 | Performance Confirmation Program Level of Information | 4 |
| NYE-SAFETY-001 | Failure to include activities in the performance confirmation program sufficient to assess the adequacy of information used to evaluate the capability of the upper natural barrier (UNB) following repository closure | 4 |
| NYE-SAFETY-002 | Failure to include activities in the performance confirmation program sufficient to assess the adequacy of information used to evaluate the capability of the lower natural barrier (LNB) following repository closure | 4 |
| NYE-SAFETY-003 | Failure to include activities in the performance confirmation program sufficient to assess the adequacy of information used as the basis for the site-scale model relied upon to evaluate the capability of the saturated zone (SZ) feature of the lower natural barrier (LNB) following repository closure. | 4 |
| NEV-MISC-003 | LA References | 5 |

Spreadsheet # 2
Answer to
Board Question 2
(July 21, 2009 Order)

| Contention Label | Contention Name | Legal Issue | SER Volume |
|-------------------------|--|--------------------|-------------------|
| NEI-SAFETY-001 | Spent Nuclear Fuel Direct Disposal in Dual Purpose Canisters | Legal - CLI | 2 |
| NEI-SAFETY-002 | Insufficient Number of Non-TAD SNF Shipments to Yucca Mountain | Legal - CLI | 2 |
| NEI-SAFETY-005 | Excessive Conservatism in the Postclosure Criticality Analysis | Legal - CLI | 3 |
| NEV-MISC-003 | LA References | Legal - CLI | 5 |
| NCA-MISC-001 | Land Ownership and Control | Legal - LBP | 4 |
| NEV-MISC-002 | Alternate Waste Storage Plans | Legal - LBP | 2 |
| NEV-SAFETY-004 | Content of Quality Assurance Program | Legal - LBP | 4 |
| NEV-SAFETY-005 | Emergency Plan | Legal - LBP | 4 |
| NEV-SAFETY-006 | Part 21 Compliance | Legal - LBP | 4 |
| NEV-SAFETY-009 | Increasing CO2 Levels on Future Climate Projections | Legal - LBP | 3 |
| NEV-SAFETY-010 | Consideration of Forcing Functions on Future Climate Projections | Legal - LBP | 3 |
| NEV-SAFETY-011 | Human-Induced Climate Changes on Prediction of the Next Glacial Period | Legal - LBP | 3 |
| NEV-SAFETY-012 | Projections of Future Wetter Climate Conditions | Legal - LBP | 3 |
| NEV-SAFETY-013 | Future Climate Projections Need to Include Extreme Precipitation Events | Legal - LBP | 3 |
| NEV-SAFETY-019 | Future Infiltration Projections Need to Include Reduced Vegetation Cover | Legal - LBP | 3 |
| NEV-SAFETY-041 | Erosion FEP Screening | Legal - LBP | 3 |
| NEV-SAFETY-146 | Reliance on Preliminary or Conceptual Design Information | Legal - LBP | 2 |
| NEV-SAFETY-149 | Deviations in Design and Waste Emplacement | Legal - LBP | 3 |
| NEV-SAFETY-161 | Critical Role of Drip Shield | Legal - LBP | 3 |
| NEV-SAFETY-169 | Deferred Retrieval Plans | Legal - LBP | 2 |
| NEV-SAFETY-171 | PMA and QA | Legal - LBP | 3 |
| NEV-SAFETY-184 | Right-of-Way N-48602 | Legal - LBP | 4 |
| NEV-SAFETY-185 | Right-of-Way N-47748 | Legal - LBP | 4 |
| NEV-SAFETY-186 | Ranch Boundary Land | Legal - LBP | 4 |
| NEV-SAFETY-187 | Public Land Order 7653 | Legal - LBP | 4 |
| NEV-SAFETY-188 | Public Land Order 6802/7534 | Legal - LBP | 4 |
| NEV-SAFETY-189 | Patent 27-83-002 | Legal - LBP | 4 |
| NEV-SAFETY-190 | Unpatented Lode and Placer Mining Claims | Legal - LBP | 4 |
| NEV-SAFETY-191 | Nye County Monitoring Wells | Legal - LBP | 4 |
| NEV-SAFETY-192 | Land Outside DOE's Rights-Of-Way | Legal - LBP | 4 |
| NEV-SAFETY-193 | Land Withdrawal | Legal - LBP | 4 |
| NEV-SAFETY-194 | VH-1 Water Rights | Legal - LBP | 4 |
| NEV-SAFETY-201 | Reliance on Preliminary or Conceptual Design Information | Legal - LBP | 2 |
| NYE-SAFETY-004 | Failure to fully consider possible air quality and radiological changes due to pre-closure construction and operational activity | Legal - LBP | 2 |
| NEV-MISC-004 | Aging Facility Role under NWPA | Legal - Parties | 2 |
| NEV-MISC-005 | Role of Aging Facility | Legal - Parties | 2 |
| NEV-SAFETY-007 | Retrieval Plans and QA | Legal - Parties | 4 |
| NEV-SAFETY-172 | Inspection and Verification of TAD | Legal - Parties | 4 |
| NEV-SAFETY-196 | Description of Security Measures | Legal - Parties | 4 |
| NEV-SAFETY-199 | Performance Confirmation and Available Technology | Legal - Parties | 4 |
| NEV-SAFETY-200 | Performance Confirmation Program Level of Information | Legal - Parties | 4 |

Spreadsheet #3
Answer to
Board Questions 4, 5, and 6
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume/NEPA | Discovery Needed Per Board Question #6 |
|-------------------------|--|------------------------|---|
| NEV-NEPA-023 | Aircraft Crash Scenarios – Aging Facility | 2 | Yes (contains a safety-related issue covered in SER Volume 2) |
| INY-NEPA-006 | Failure to Adequately Describe and Analyze 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 | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| JTS-NEPA-003 | Repository Thermal Effects | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| JTS-NEPA-004 | Saturated Zone Flow Model | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| JTS-NEPA-005 | Infiltration Flux | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| JTS-NEPA-008 | Future Climate | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| NEV-NEPA-018 | Overlap between NEPA and AEA | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| WHI-NEPA-001 | Failure of Environmental Impact Statements to Fully Disclose Consequences of Radiation Contaminated Tephra Deposition in Areas Other Than That Directly Applicable to the Reasonably Maximally Exposed Individual | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| WHI-NEPA-002 | Failure of Environmental Impact Statements to Fully Disclose the Consequences of Atmospheric Transport of Radionuclides in Volcanic Gases | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| WHI-NEPA-003 | Failure of Environmental Impact Statements to Discuss Means to Mitigate Adverse Impacts of Radiation Contaminated Tephra Deposition in Areas Other Than That Directly Applicable to the Reasonably Maximally Exposed Individual | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| WHI-NEPA-004 | Failure of Environmental Impact Statements to Discuss Means to Mitigate diverse Impacts of Atmospheric | 3 | Yes (contains a safety-related issue covered in SER Volume 3) |
| CAL-NEPA-021 | Failure to Provide a Complete and Adequate Discussion of the Nature and Extent of the Repository's Cumulative Impact on Groundwater in the Lower Carbonate Aquifer | 3 & Groundwater | Groundwater |
| CAL-NEPA-022 | 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 | 3 & Groundwater | Groundwater |
| CAL-NEPA-023 | Failure to Provide a Complete and Adequate Discussion of the Nature and Extent of the Repository's Cumulative Impact from Surface Discharge of Groundwater | 3 & Groundwater | Groundwater |
| CAL-NEPA-024 | 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 | 3 & Groundwater | Groundwater |
| CAL-NEPA-025 | Failure to Provide a Complete and Adequate Discussion of the Nature and Extent of the Repository's Cumulative Impacts from Groundwater Pumping | 3 & Groundwater | Groundwater |
| INY-NEPA-001 | 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 | 3 & Groundwater | Groundwater |

Spreadsheet #3
Answer to
Board Questions 4, 5, and 6
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume/NEPA | Discovery Needed Per Board Question #6 |
|-------------------------|---|-------------------------------------|---|
| INY-NEPA-002 | 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 | 3 & Groundwater | Groundwater |
| INY-NEPA-003 | 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 | 3 & Groundwater | Groundwater |
| INY-NEPA-004 | Failure to Provide a Complete and Adequate Discussion of the Nature and Extent of the Repository's Cumulative Impact from Surface Discharge of Groundwater | 3 & Groundwater | Groundwater |
| INY-NEPA-005 | 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 | 3 & Groundwater | Groundwater |
| JTS-NEPA-001 | Doses Related To Ingestion Of Particulate Matter | 3 & Groundwater | Groundwater |
| JTS-NEPA-009 | NEPA Requirements | 3 & Groundwater | Groundwater |
| NEV-NEPA-020 | Radionuclide Contamination of Aquifer | 3 & Groundwater | Groundwater |
| NEV-NEPA-021 | Contaminated Aquifer Discharges | 3 & Groundwater | Groundwater |
| NYE-NEPA-001 | Failure to adequately consider cumulative impacts to the environment over time, from releases of radiological and other contaminants to groundwater and from surface water discharges | 3 & Groundwater | Groundwater |
| NCA-NEPA-001 | Failure of FEIS and FSEIS to adequately identify, address and mitigate significant, adverse impacts to cultural resources and to Indian people, including NCAC's members | No SER Volume/Not Groundwater | Yes |
| 4NC-NEPA-001 | Insufficient analysis in the Environmental Impact Statement of significant and substantial considerations of the environmental impacts of transportation by truck through the Four Nevada Counties | No SER Volume/Not Groundwater | Yes |
| 4NC-NEPA-002 | Insufficient analysis in Environmental Impact Statement of significant and substantial considerations related to emergency response capacity within the Four Nevada Counties | No SER Volume/Not Groundwater | Yes |
| 4NC-NEPA-003 | Insufficient analysis in Environmental Impact Statement of significant & substantial new considerations related to selection of spent nuclear fuel transportation container, which renders Environmental Impact Statement inadequate | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-001 | DOE's NEPA Documents Impermissibly Segment the Project by Deferring Analysis of the Environmental Impacts of Transportation of Spent Nuclear Fuel and High-Level Waste Through California to Yucca Mountain | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-002 | DOE's NEPA Documents Impermissibly Segment the Project as to Route Selection and Route-Specific Impact Analysis | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-003 | DOE's NEPA Documents Impermissibly Fail to Analyze and Disclose Different Environmental Impacts from the Mina and Caliente Routes | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-004 | DOE's NEPA Documents Fail to Adequately Discuss or Analyze Mitigation in California Adequately | No SER Volume/Not Groundwater | Yes |

Spreadsheet #3
Answer to
Board Questions 4, 5, and 6
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume/NEPA | Discovery Needed Per Board Question #6 |
|-------------------------|--|-------------------------------|---|
| CAL-NEPA-005 | DOE's NEPA Documents Are Based on an Incomplete and Inaccurate Project Description, Since a Doubling or Tripling of Yucca Mountain's Capacity Is Reasonably Foreseeable Due to DOE's Request to Congress to Authorize Such a Capacity Increase | No SER Volume/Not Groundwater | No |
| CAL-NEPA-007 | DOE's NEPA Documents Fail to Adequately Describe Transportation Impacts on Emergency Services in San Bernardino County | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-008 | DOE's NEPA Documents Fails to Describe the Maximum Reasonably Foreseeable Accident | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-010 | Failure to Analyze Impacts of Intermodal Transfers | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-011 | Failure to Evaluate Impacts Within All Radiologic Regions of Influence | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-012 | Failure to Discuss and Analyze Collocation Risks | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-013 | Failure to Discuss and Analyze Barge Risks | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-014 | Failure to Describe and Analyze Waste Acceptance Criteria | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-015 | By Using Representative Routes, DOE Has Failed to Analyze Environmental Impacts of Probable Routes Railroads Would Use | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-017 | Environmental Impacts from the Use of Heavy Haul Trucks at Local Sites | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-018 | Failure to Analyze Impacts from the Use of California State Route | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-019 | Failure to Analyze Use of TAD Canisters | No SER Volume/Not Groundwater | Yes |
| CAL-NEPA-020 | Failure to Adequately Analyze Impacts on Local Emergency Management Responsibilities | No SER Volume/Not Groundwater | Yes |
| CLK-NEPA-001 | The DOE Ignores Impacts on Emergency Management and Public Safety | No SER Volume/Not Groundwater | Yes |
| CLK-NEPA-002 | The DOE Fails to Analyze Known and Feasible Rail Corridor Alternatives | No SER Volume/Not Groundwater | Yes |
| CLK-NEPA-003 | The DOE Ignores Socio-Economic Impacts | No SER Volume/Not Groundwater | Yes |
| INY-NEPA-007 | Failure to Address Socioeconomic Impacts in the County of Inyo | No SER Volume/Not Groundwater | Yes |
| JTS-NEPA-006 | Economic Analysis | No SER Volume/Not Groundwater | Yes |

Spreadsheet #3
Answer to
Board Questions 4, 5, and 6
(July 21, 2009 Order)

| Contention Label | Contention Name | SER Volume/NEPA | Discovery Needed Per Board Question #6 |
|-------------------------|---|-------------------------------------|---|
| JTS-NEPA-007 | Mitigation | No SER Volume/Not Groundwater | Yes |
| NEI-NEPA-001 | Inadequate NEPA Analysis for 90% TAD Canister Receipt Design | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-001 | Transportation Sabotage Scenarios | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-002 | Transportation Sabotage Cleanup Costs | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-003 | Transportation Accident Cleanup Costs | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-004 | Shared Use Option | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-005 | Radiological Regions of Influence for Transportation | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-006 | Caliente Rail Alignment Plan and Profile Information | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-007 | Overweight Trucks | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-008 | Impacts on Aesthetic Resources | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-009 | Transportation Sabotage Risk vs. At-Reactor Storage | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-010 | Long-Term Radiation Exposure Following Sabotage | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-011 | Sabotage Risk, Pressurized Cask | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-012 | Transportation Risk Assumptions | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-013 | Grazing Impacts | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-014 | Deferred Assessment of Railroad Construction Impacts on Grazing | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-015 | TAD Shipment Estimates | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-016 | Representative Routes | No SER Volume/Not Groundwater | Yes |
| NEV-NEPA-022 | No-Action Alternative | No SER Volume/Not Groundwater | Yes |

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

**09-892-HLW-CAB04
Thomas S. Moore, Chairman
Paul S. Ryerson
Richard E. Wardwell**

| | |
|---|-------------------|
| _____) | |
| In the Matter of:) | |
| U.S. Department of Energy) | August 17, 2009 |
|) | |
| (High Level Waste Repository) | Docket No. 63-001 |
| Construction Authorization Application)) | |
| _____) | |

CERTIFICATE OF SERVICE

I hereby certify that copies of the “JOINT RESPONSE TO JULY 21, 2009 ORDER (CONCERNING SERIAL CASE MANAGEMENT)” have been served on the following persons this 17th day of August 2009 through the Nuclear Regulatory Commission’s Electronic Information Exchange.

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Atomic Safety and Licensing Board Panel
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