UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:
Thomas S. Moore, Chairman
Paul S. Ryerson
Richard E. Wardwell

In the Matter of:	)	
	)	Docket No. 63-001
U.S. Department of Energy	)	
	)	ASLBP No. 09-892-HLW-CAB04
(High Level Waste Repository	)	
Construction Authorization Application)	)	October 13, 2009
	)	

U.S. DEPARTMENT OF ENERGY'S
INITIAL LIST OF PARTY WITNESSES AND RELATED INFORMATION

The U.S. Department of Energy (DOE) hereby submits its initial list of Party Witnesses and related information pursuant to the Case Management Order #2 (CMO 2) issued on September 30, 2009, by Construction Authorization Board-04 (CAB-04).[1] *See* CMO 2 at 5-6. DOE's identification of Party Witnesses is based upon its case preparation efforts to date.

Attachment A to this submittal provides the spreadsheet of the contentions that are within the scope of Phase I (taken directly from the Appendix to CMO 2). It has been expanded with an additional column to include the names of DOE witnesses identified to date on a contention by contention basis.[2] Attachment B to this submittal provides for each DOE witness, a list of contentions that will be addressed, a general statement of the subject matter(s) that will be

[1] The deadline for filing a list of Party Witnesses and related information is ten days after the start of Phase I discovery, or ten days after October 1, 2009. *See* CMO 2 at 3, 5. Ten days after October 1, 2009 is Sunday, October 11, 2009. Since Monday, October 12, 2009 was Columbus Day and a Federal holiday, DOE's filing on Tuesday, October 13, 2009 is timely. *See* 10 C.F.R. § 2.1017.

[2] DOE is not identifying witnesses for legal issue contentions, which will be briefed this fall.

addressed, and a list of all cases in which that witness has provided testimony in the previous four years. Attachment C to this submittal provides for each DOE witness, a curriculum vitae and a list of all relevant publications authored by that witness in the previous ten years. Attachments B and C are organized alphabetically by the last name of each DOE witness.

Respectfully submitted,

Signed electronically by Donald J. Silverman

Donald J. Silverman
Alex S. Polonsky
Counsel for the U.S. Department of Energy
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, N.W.
Washington, DC 20004

James Bennett McRae
Martha S. Crosland
U.S. Department of Energy
Office of the General Counsel
1000 Independence Avenue, SW
Washington, DC 20585

Dated in Washington, DC
this 13th day of October 2009

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	)	October 13, 2009
	)	
(High Level Waste Repository	)	Docket No. 63-001
Construction Authorization Application)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "**U.S. DEPARTMENT OF ENERGY'S INITIAL LIST OF PARTY WITNESSES AND RELATED INFORMATION**" have been served on the following persons on this 13th day of October 2009 through the Nuclear Regulatory Commission's Electronic Information Exchange.

CAB 01
Atomic Safety and Licensing Board Panel
William J. Froehlich, Chair
E-mail: wjf1@nrc.gov
Thomas S. Moore
E-mail: tsm2@nrc.gov
Richard E. Wardwell
E-mail: rew@nrc.gov

CAB 02
Atomic Safety and Licensing Board Panel
Michael M. Gibson, Chair
E-mail: mmg3@nrc.gov
Alan S. Rosenthal
E-mail: rsnthl@nrc.gov; axr@nrc.gov
Nicholas G. Trikouros
E-mail: ngt@nrc.gov

CAB 04
Atomic Safety and Licensing Board Panel
Thomas S. Moore, Chair
E-mail: tsm2@nrc.gov
Paul S. Ryerson
E-mail: psr1@nrc.gov
Richard E. Wardwell
E-mail: rew@nrc.gov

CAB 03
Atomic Safety and Licensing Board Panel
Paul S. Ryerson, Chair
E-mail: psr1@nrc.gov
Michael C. Farrar
E-mail: mcf@nrc.gov
Mark O. Barnett
E-mail: mob1@nrc.gov; mark.barnett@nrc.gov

Parties Served	E-mail Addresses
Adams, Marta	madams@ag.nv.gov
Andersen, Robert M.	robert.andersen@akerman.com
Bailey, Annie	baileys@lcturbonet.com
Barlow, Gregory	lcda@lcturbonet.com
Barnett, Mark O.	mob1@nrc.gov; mark.barnett@nrc.gov
Baughman, Mike	bigboff@aol.com
Bauser, Michael A.	mab@nei.org
Belete, Elene	ebelete@jsslaw.com
Bell, Kevin W.	kwbell@energy.state.ca.us
Berger, Michael	mberger@bsglaw.net
Berkey, Curtis	curtis.berkey@abwwlaw.com
Beutel, Theodore	tbeutel@eurekanv.org
Bollwerk III, G. Paul	gpb@nrc.gov
Borella, Edward	edward_borella@ymp.gov
Borski, Laurie	lborski@nuclearlawyer.com
Brooks, Felicia M.	fbrooks@ndnlaw.com
Bupp, Margaret	mjb5@nrc.gov
Carter, Lorraine	lcarter@captionreporters.com
Cereghino, Stephen	stephen_cereghino@ymp.gov
Chandler, Christopher	ccc1@nrc.gov
Choate, Zoie	zchoate@co.nye.nv.us
Colburn, Ross	rcolburn@ndnlaw.com
Cottingham, Anne	awc@nei.org
Crosland, Martha S.	Martha.Crosland@hq.doe.gov
Curran, Diane	dcurran@harmoncurran.com
Damele, Ronald	rdamele@eurekanv.org
DiNunzio, Nicholas	Nicholas.DiNunzio@hq.doe.gov
Dobie, Julie	jdobie@gklaw.com
Dreher, Michael	michael.dreher@nrc.gov
Dudley, Sherry	sdudley@co.nye.nv.us
Durbin, Susan	susan.durbin@doj.ca.gov
Eredia, Sally	seredia@ndnlaw.com
Faglioni, Kelly L.	kfaglioni@hunton.com
Farrar, Michael C.	mcf@nrc.gov
Fitzpatrick, Charles J.	cfitzpatrick@nuclearlawyer.com
Francis, Karin	kxf4@nrc.gov
Fraser, Matthew	mfraser@harmoncurran.com
Frishman, Steve	steve.frishman@gmail.com
Froehlich, William J.	wjf1@nrc.gov
Gendelman, Adam S.	Adam.Gendelman@nrc.gov
Gibson, Michael M.	mmg3@nrc.gov
Giitter, Rebecca	rll@nrc.gov
Gilman, Joseph	jsg1@nrc.gov
Ginsberg, Ellen C.	ecg@nei.org
Golshan, K. G.	kg.golshan@nrc.gov
Gores, Jennifer A.	jgores@armstrongteasdale.com
Gutierrez, Jocelyn	Jocelyn.Gutierrez@ymp.gov
Hanna, Robert S.	rshanna@bsglaw.net

Harrington, Arthur J.	aharring@gklaw.com
Hawkens, E. Roy	erh@nrc.gov
Hearing Docket	hearingdocket@nrc.gov
Heinzen, Steven A.	sheinzen@gklaw.com
Hellstrom, George W.	George.Hellstrom@ymp.gov
Hembacher, Brian	brian.hembacher@doj.ca.gov
Horin, William	whorin@winston.com
Houck, Darcie L.	dhouck@ndnlaw.com
Irwin, Donald P.	dirwin@hunton.com
James, Gregory L. Esq.	gljames@earthlink.net
Johnson, Abigail	eurekanrc@gmail.com
Kahn, Zachary	zxk1@nrc.gov
Klevorick, Phil	klevorick@co.clark.nv.us
Kriner, Jeffrey	jeffrey_kriner@ymp.gov
LaPlante, Erica	eal1@nrc.gov
Larimore, Patricia	plarimore@talisman-intl.com
Lawrence, John W.	jlawrence@nuclearlawyer.com
Leigh, Rovianne	rleigh@abbwlaw.com
Lembke, Alisa	alembke@inyocounty.us
Lenehan, Daniel W.	dwl2@nrc.gov
Lewis, Linda	linda.lewis@nrc.gov
List, Robert F.	rlist@armstrongteasdale.com
Loveland, Bryce	bloveland@jsslaw.com
Lynch, Susan	slynch1761@gmail.com
Maerten, Daniel	Daniel.Maerten@caci.com
Malsch, Martin G.	mmalsch@nuclearlawyer.com
Martin, Circe	ogcmailcenter@nrc.gov
Mathias, Linda	yuccainfo@mineralcountynv.org
McRae, Ben	Ben.McRae@hq.doe.gov
Meharg, Stephanie	smeharg@hunton.com
Mercado, Michele	michele.mercado@doj.ca.gov
Miras-Wilson, Rachel	rwilson@winston.com
Montesi, Susan	smontesi@nuclearlawyer.com
Moore, Thomas S.	tsm2@nrc.gov
Mueller, Edwin	muellered@msn.com
Murphy, Malachy	mrmurphy@chamberscable.com
Nezhad, Cyrus	Cyrus.Nezhad@hq.doe.gov
Niegemann, Brian	bniegemann@ndnlaw.com
OCAA Mail Center	OCAAMAIL@nrc.gov
Pak, Christina	Christina.Pak@hq.doe.gov
Peebles, John M.	jpeebles@ndnlaw.com
Pitchford, Loreen, LSN Coordinator	lpitchford@comcast.net
Pitts, Jason	jayson@idtservices.com
Poland, Douglas M.	dpoland@gklaw.com
Putzu, Frank	frank.putzu@navy.mil
Renfro, Hanna	hrenfro@gklaw.com
Repka, David A.	drepka@winston.com
Rhoan, Robert	rrhoan@ndnlaw.com
Robbins, Alan	arobbins@jsslaw.com

Roby, Debra	droby@jsslaw.com
Rosenthal, Alan S.	rsnthl@nrc.gov; axr@nrc.gov
Rotman, Matthew	matthew.rotman@nrc.gov
Ryan, Tom	Tom.Ryan@nrc.gov
Ryerson, Paul S.	psr1@nrc.gov
Schwartz, Jacqueline	jschwartz@gklaw.com
Sears, Richard	rwsears@wpcda.org
Shebelskie, Michael R.	mshebelskie@hunton.com
Silberg, Jay E.	jay.silberg@pillsburylaw.com
Silvia, Andrea L.	alc1@nrc.gov
Simkins, Connie	jcciac@co.lincoln.nv.us
Simon, Mike	wpnucast1@mwpower.net
Sisco, Carlos L.	csisco@winston.com
Sommer, Josephine	Josephine.Sommer@ymp.gov
Sullivan, Timothy E.	timothy.sullivan@doj.ca.gov
Trikouros, Nicholas G.	ngt@nrc.gov
VanNiel, Jeffrey D.	nbrjdvn@gmail.com
Vazquez, Tameka	purpose_driven@yahoo.com
Vibert, Elizabeth A.	VibertE@co.clark.nv.us
Walsh, Timothy J.	timothy.walsh@pillsburylaw.com
Wardwell, Richard E.	rew@nrc.gov
Webb, Maria	maria.webb@pillsburylaw.com
Whipple, Bret	bretwhipple@lcturbonet.com
Williams, Scott	swilliams@abbwlaw.com
Wright, Belinda A.	bwright@hunton.com
Young, Mitzi A.	may@nrc.gov
Zabarte, Ian	mrizabarte@gmail.com
Zobler, Marian L.	mlz@nrc.gov

(*electronically signed by)Donald J. Silverman*
Donald J. Silverman

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-196	Description of Security Measures	1	Kathryn Knapp
CLK-SAFETY-002	The DOE's Failure to Analyze Missile Testing	3	Jack Bailey Robert Howard
CLK-SAFETY-003	The DOE Miscalculates Basaltic Magma Melting Depth	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-004	The DOE Ignores the Time Span of Basaltic Volcanism	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-005	The DOE Improperly Focuses on Upper Crustal Extension Patterns	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-006	The DOE Improperly Excludes the Death Valley Volcanic Field and Greenwater Range from Volcanism Calculations	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-007	The DOE Improperly Estimates Igneous Event Probability for 10,000 Years and 1,000,000 Years	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-008	The DOE Ignores 11-Million Year Volcanism Data and Instead Relies on Only 5-Million Year Volcanism Data	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-009	The DOE Fails to Consider Alternative Igneous Event Conceptual Models	3	Frank Perry Kevin Coppersmith
CLK-SAFETY-010	The DOE Ignores Igneous Event Data Evaluated Since 1996 in the Total System Performance Analysis	3	Frank Perry Clifford Hansen Kevin Coppersmith
CLK-SAFETY-011	The DOE Lacks Sufficient Geophysical Data to Support Its Volcanic Model	3	Frank Perry Kevin Coppersmith
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	Frank Perry Jane Summerson David Lechel
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	Frank Perry Kevin Coppersmith
JTS-NEPA-003	Repository Thermal Effects	3	Ernest Hardin Jane Summerson
JTS-NEPA-005	Infiltration Flux	3	Joshua Stein Jane Summerson
JTS-NEPA-008	Future Climate	3	Saxon Sharpe Jane Summerson
NEI-SAFETY-005	Excessive Conservatism in the Postclosure Criticality Analysis	3	N/A (Legal)
NEI-SAFETY-006	Drip Shields Are Not Necessary	3	Robert Howard Clifford Hansen Jack Bailey
NEV-NEPA-018	Overlap between NEPA and AEA	3	Dave Lechel Jane Summerson
NEV-SAFETY-009	Increasing CO2 Levels on Future Climate Projections	3	N/A (Legal)
NEV-SAFETY-010	Consideration of Forcing Functions on Future Climate Projections	3	N/A (Legal)
NEV-SAFETY-011	Human-Induced Climate Changes on Prediction of the Next Glacial Period	3	N/A (Legal)
NEV-SAFETY-012	Projections of Future Wetter Climate Conditions	3	N/A (Legal)
NEV-SAFETY-013	Future Climate Projections Need to Include Extreme Precipitation Events	3	N/A (Legal)
NEV-SAFETY-014	Precipitation Model	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-015	Alternative Precipitation Models and Weather Variables	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-016	Qualification of Climate and Infiltration Models	3	Joshua Stein
NEV-SAFETY-017	Calibration and Simulation of Precipitation Model	3	Daniel Levitt Daniel Stephens Cedric Sallaberry
NEV-SAFETY-018	Use of Climate Data from the Analog Sites	3	Daniel Levitt Daniel Stephens Saxon Sharpe
NEV-SAFETY-019	Future Infiltration Projections Need to Include Reduced Vegetation Cover	3	N/A (Legal)

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-020	Net Infiltration Alternative Conceptual Model	3	Joshua Stein Daniel Stephens Clifford Hansen
NEV-SAFETY-021	Infiltration Model and Changes in Soil and Rock Properties	3	Joshua Stein Daniel Stephens
NEV-SAFETY-022	Net Infiltration Model Water Balance	3	Joshua Stein Daniel Stephens
NEV-SAFETY-023	Evaluation of Alternative Net Infiltration Models	3	Joshua Stein Daniel Stephens
NEV-SAFETY-024	Precipitation Data in Net Infiltration Model	3	Daniel Stephens
NEV-SAFETY-025	Site-Specific Data in Net Infiltration Model	3	Joshua Stein Daniel Stephens
NEV-SAFETY-026	Soil Properties Data in Net Infiltration Model	3	Joshua Stein Daniel Stephens
NEV-SAFETY-027	Rock Properties Data in Net Infiltration Model	3	Joshua Stein Daniel Stephens Cedric Sallaberry
NEV-SAFETY-028	Net Infiltration Model Rock Properties Uncertainty Analysis	3	Joshua Stein Daniel Stephens
NEV-SAFETY-029	Spatial Variability of Soils and Vegetation in Net Infiltration Model	3	Daniel Stephens Joshua Stein
NEV-SAFETY-030	Temporal Variability in Precipitation in Net Infiltration Model	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-031	Calibration of Net Infiltration Model	3	Joshua Stein Daniel Stephens
NEV-SAFETY-032	Use of Initial Conditions in Net Infiltration Model	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-033	Approach to Estimating Percolation	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-034	Representation of Storm Duration for Net Infiltration Modeling	3	Daniel Levitt Daniel Stephens
NEV-SAFETY-035	Episodic Nature of Infiltration Fluxes in Net Infiltration Analysis	3	Daniel Levitt James Houseworth
NEV-SAFETY-036	Corroboration of Model Results in Post-Model Validation of Net Infiltration Simulations	3	Joshua Stein Daniel Stephens
NEV-SAFETY-037	Net Infiltration Model Methodology	3	Joshua Stein Daniel Stephens
NEV-SAFETY-038	Parameter Correlations in Net Infiltration Model	3	Joshua Stein
NEV-SAFETY-039	Temperature Lapse Rate Verification	3	Joshua Stein
NEV-SAFETY-040	Parameter Uncertainty Treatment in Net Infiltration Model	3	Joshua Stein Daniel Stephens
NEV-SAFETY-041	Erosion FEP Screening	3	N/A (Legal)
NEV-SAFETY-042	Validation of Unsaturated Zone Flow Model by Simulation of Natural Chloride Distribution in Pore Waters	3	James Houseworth
NEV-SAFETY-043	Validation of Unsaturated Zone Flow Model by Carbon-14 Contents, Strontium Isotope Compositions and Calcite Mineral Precipitate Abundances	3	Charles Bryan Brian Marshall James Houseworth
NEV-SAFETY-044	Flow in the Unsaturated Zone from Episodic Infiltration	3	James Houseworth Gary LeCain
NEV-SAFETY-045	Effects of Episodic Flow	3	James Houseworth Gary LeCain
NEV-SAFETY-046	Extreme Events Undefined	3	Joshua Stein James Houseworth
NEV-SAFETY-047	Physical Basis of Site Scale Unsaturated Zone Flow	3	H.H. Liu
NEV-SAFETY-048	Multi-Scale Thermal-Hydrologic Model	3	Jens Birkholzer Jack Bailey
NEV-SAFETY-049	Models of Fluid Movement in the Unsaturated Zone	3	James Houseworth Charles Bryan Brian Marshall
NEV-SAFETY-050	Alternative Discrete Fracture Flow Models	3	Stefan Finsterle
NEV-SAFETY-051	Potential Convective Self Organization of 2-Phase Flow	3	Ernest Hardin
NEV-SAFETY-052	EBS and Near-Field Modeling Approach	3	Jens Birkholzer Ernest Hardin
NEV-SAFETY-053	Application of the Fracture Matrix Dual Continuum Model to All Unsaturated Zone Flow Processes	3	H.H. Liu

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-054	Constitutive Relationships in the Yucca Mountain Infiltration, Thermo-Hydrologic, and TSPA Models	3	Daniel Levitt H.H. Liu
NEV-SAFETY-055	Data for the Chemistry of Pore Waters in the Topopah Springs (TSw) Formation	3	Charles Bryan Brian Marshall
NEV-SAFETY-056	Geochemical Interactions and Evolution in the Unsaturated Zone, Including Thermo-Chemical Alteration of TSw Host Rock	3	Pat Brady James Houseworth
NEV-SAFETY-057	Data for Near-Field Chemistry Models	3	Charles Bryan Brian Marshall David Sassani
NEV-SAFETY-058	Groundwater Samples in the Unsaturated Zone Sorption Tests	3	Pat Brady Paul Reimus
NEV-SAFETY-059	Groundwater Compositions Assumed	3	Pat Brady Paul Reimus
NEV-SAFETY-060	Empirical Site-Specific Data and the Near-Field Chemistry Model	3	Charles Bryan A.J. Francis
NEV-SAFETY-061	Ambient Seepage into Emplacement Drifts	3	Stefan Finsterle
NEV-SAFETY-062	Thermal Seepage into Emplacement Drifts	3	Stefan Finsterle Ernest Hardin
NEV-SAFETY-063	Effect of Rock Bolts on Ambient Seepage	3	Jens Birkholzer Ernest Hardin
NEV-SAFETY-064	Effect of Rock Bolts on Thermal Seepage	3	Jens Birkholzer Ernest Hardin
NEV-SAFETY-065	Structural Control of Seepage in the Emplacement Drift	3	Stefan Finsterle Ernest Hardin
NEV-SAFETY-066	Attenuation of Seepage into Naturally Fractured Drift Walls	3	Stefan Finsterle Ernest Hardin
NEV-SAFETY-067	Evaluation of Uncertainties in Estimated Chemical Properties, Especially pH Values, of Evaporated Drift Brines	3	Clifford Hansen Charles Bryan
NEV-SAFETY-068	In-Drift Condensation on Mineral Dust	3	Charles Bryan David Enos
NEV-SAFETY-069	Coupled Seepage and Dust Deliquescence	3	Joseph Payer David Enos Dave Sassani
NEV-SAFETY-070	THC Evolution of Near-Field Pre-Seepage Unsaturated Zone Water	3	Ernest Hardin Charles Bryan
NEV-SAFETY-071	Microbially Induced Water Chemistry Changes in the Incubator Zone	3	A.J. Francis
NEV-SAFETY-072	Characterization of Dust Sources	3	Charles Bryan Russell Jarek Brian Marshall
NEV-SAFETY-073	In-Drift Organic Contribution by Ventilation or Unsaturated Zone Water	3	Charles Bryan A.J. Francis Brian Marshall
NEV-SAFETY-074	Impact of Microbial Activity	3	A.J. Francis
NEV-SAFETY-075	Microbially Influenced Corrosion Model	3	A.J. Francis Joseph Payer David Enos
NEV-SAFETY-076	Microbial Denitrification	3	A.J. Francis
NEV-SAFETY-077	Corrosion from Rock Bolt Seepage	3	Jens Birkholzer Edward Thomas
NEV-SAFETY-078	Static Corrosion Tests on Alloy 22	3	David Enos Charles Bryan David Shoesmith
NEV-SAFETY-079	Static General Corrosion Test Solutions	3	David Enos Charles Bryan
NEV-SAFETY-080	Localized Corrosion, Chloride Bearing Mineral Deposits and Hot Wall Effects	3	David Enos Gerald Gordon Charles Bryan David Shoesmith
NEV-SAFETY-081	Hydrogen Uptake Resulting From General Corrosion	3	David Enos Gerald Gordon David Shoesmith Ronald Ballinger
NEV-SAFETY-082	Corrosion of Thermally Oxidized Titanium	3	Michael Anderson David Enos David Shoesmith
NEV-SAFETY-083	Adequacy of Methods of General and Localized Corrosion Testing of the Drip Shield	3	David Enos Joseph Payer Ronald Ballinger

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-084	Use of Differential Weight Loss to Estimate Very Low Corrosion Rates	3	David Enos Joseph Payer Ronald Ballinger
NEV-SAFETY-085	Declining Corrosion Rate over Time	3	David Enos David Shoesmith Joe Payer
NEV-SAFETY-086	Role of Rock Dust on Canister Surfaces in Localized Corrosion	3	David Enos Charles Bryan David Sassani
NEV-SAFETY-087	Intergranular SCC Corrosion During Dry-Wet Cycle	3	David Enos Gerald Gordon David Sassani
NEV-SAFETY-088	Thermodynamics of Complex Deliquescent Salt Reactions During C-22 Corrosion	3	Charles Bryan David Sassani
NEV-SAFETY-089	Inhibition of C-22 Corrosion by High Nitrate to Chloride Ratio	3	Ronald Ballinger David Enos David Sassani David Shoesmith
NEV-SAFETY-090	Effects of Rock Bolt on C-22 and Ti-7 Corrosion Reactions	3	David Enos Joseph Payer Ronald Ballinger
NEV-SAFETY-091	Representativeness of C-22 and Ti-7 Corrosion Testing Methods	3	David Enos Ronald Ballinger Charles Bryan David Shoesmith
NEV-SAFETY-092	Impacts of Fluoride Due to Breach of HLW Containers	3	Pat Brady David Enos David Sassani Jack Bailey
NEV-SAFETY-093	Natural Lead Reactions on C-22	3	David Sassani Charles Bryan Gerald Gordon
NEV-SAFETY-094	Significance of Mineral Crusts in C-22 Corrosion	3	David Sassani Joseph Payer David Enos Ronald Ballinger
NEV-SAFETY-095	Peak Thermal Period Seepage and Corrosion	3	Jens Birkholzer David Sassani
NEV-SAFETY-096	Salt Production and C-22 Corrosion Due to Heat-Pipe Conditions	3	Jens Birkholzer David Sassani David Enos
NEV-SAFETY-097	Crevice Corrosion on C-22 Due to Drip Shield Corrosion Debris	3	David Enos Gerald Gordon Joseph Payer Ronald Ballinger
NEV-SAFETY-098	Rate of Drip Shield Interconnection Corrosion	3	Michael Anderson Gerald Gordon David Enos David Shoesmith
NEV-SAFETY-099	Boric Acid Production from HLW Dissolution	3	Jack Bailey Pat Brady David Enos David Sassani
NEV-SAFETY-100	Ground Support Components and In-Drift Modeling	3	Charles Bryan David Enos
NEV-SAFETY-101	Sulfur Accumulation at the Metal-Passive Film Interface	3	David Shoesmith Joseph Payer Gerald Gordon
NEV-SAFETY-102	Sulfur Accumulation and Localized Corrosion	3	David Shoesmith Joseph Payer Gerald Gordon
NEV-SAFETY-103	Sulfur Accumulation and Stress Corrosion Initiation	3	Joseph Payer Gerald Gordon
NEV-SAFETY-104	Sulfur Accumulation and Stress Corrosion Propagation	3	Joseph Payer Gerald Gordon

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-105	Drip Shield Corrosion Environment	3	David Enos Ernest Hardin David Sassani
NEV-SAFETY-106	Waste Container Corrosion Environment	3	David Enos Gerald Gordon Charles Bryan David Sassani
NEV-SAFETY-107	Electrochemical Reduction of Nitrate	3	Charles Bryan David Enos Ronald Ballinger Clifford Hansen
NEV-SAFETY-108	Molten Salt Corrosion of the Canister	3	Charles Bryan
NEV-SAFETY-109	Molten Salt Corrosion of the Drip Shield	3	Charles Bryan
NEV-SAFETY-110	Rock Bolt Corrosion	3	Jack Bailey Edward Thomas
NEV-SAFETY-111	HLW Waste Glass Dissolution	3	Pat Brady
NEV-SAFETY-112	HLW Waste Glass Degradation	3	Pat Brady
NEV-SAFETY-113	Competitive Sorption in the Unsaturated Zone	3	James Houseworth Robert Andrews Paul Reimus
NEV-SAFETY-114	Applicability of Sorption Data	3	James Houseworth Dave Sassani Robert Andrews Paul Reimus
NEV-SAFETY-115	Matrix Diffusion	3	James Houseworth David Sevougian Bill Arnold Paul Reimus
NEV-SAFETY-116	Saturated Zone Redox Conditions	3	Bill Arnold Paul Reimus Dave Sassani Clifford Hansen
NEV-SAFETY-117	Radionuclide Sorption in the Saturated Zone	3	Bill Arnold Paul Reimus Dave Sassani Clifford Hansen
NEV-SAFETY-118	Estimation of Uncertainties in Soil-to-Plant Transfer Factors	3	Maryla Wasiolek
NEV-SAFETY-119	Estimation of Uncertainties in Animal Product Transfer Coefficients	3	Maryla Wasiolek
NEV-SAFETY-120	RMEI Diet	3	Maryla Wasiolek
NEV-SAFETY-121	Host Rock Geomechanical Properties	3	Mark Board Charles Fairhurst Branko Damjanac Ronald Price
NEV-SAFETY-122	Screening of Drift Degradation FEPs	3	Mark Board Charles Fairhurst Branko Damjanac
NEV-SAFETY-123	Durability of Ground Support	3	Jack Bailey Edward Thomas
NEV-SAFETY-124	Welding of Alpha Beta Titanium Alloy to Unalloyed titanium	3	Michael Anderson David Enos Gerald Gordon David Shoesmith
NEV-SAFETY-125	Effectiveness of Stress Relief to Eliminate SCC or Hydrogen Effects	3	Michael Anderson David Enos Gerald Gordon
NEV-SAFETY-126	Properties of Dissimilar Metal Weld Joints between Grade 29 and Grade 7 Titanium	3	Michael Anderson David Enos Gerald Gordon
NEV-SAFETY-127	Hydrogen and Erti-28 Filler Metal for Welded Joints Between Grade 29 and Grade 7 Titanium	3	Michael Anderson David Enos Gerald Gordon
NEV-SAFETY-128	Nuclear Code and Fabrication Quality Assurance Standards	3	Don Beckman Michael Anderson

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-129	Early Failure Mechanisms Associated with Titanium Fabrication	3	Michael Anderson Gerald Gordon Don Beckman John (Art) McClure
NEV-SAFETY-130	Drip Shield Emplacement Plan, Equipment, and Schedule	3	Michael Anderson Edward Thomas
NEV-SAFETY-131	Rock Debris Removal	3	Jack Bailey Mark Board Edward Thomas
NEV-SAFETY-132	TEV Description	3	Edward Thomas
NEV-SAFETY-133	Drip Shield Gantry Description	3	Michael Anderson Edward Thomas
NEV-SAFETY-134	Retrieval or Alternate Storage Description	3	Jack Bailey Edward Thomas
NEV-SAFETY-136	Phased Ground Support Installation	3	Mark Board Ernest Hardin Jack Bailey Edward Thomas
NEV-SAFETY-137	Construction of the Emplacement Drifts	3	Edward Thomas Mark Board
NEV-SAFETY-138	Description of the Ventilation System for the Repository Options Made in the TSPA-LA Regarding Waste Isolation	3	Ernest Hardin Edward Thomas
NEV-SAFETY-139	Description of Reasonable Emergencies	3	Kathryn Knapp
NEV-SAFETY-140	Engineered Barrier System Design Basis	3	Jack Bailey Ernest Hardin Edward Thomas
NEV-SAFETY-141	Ground Support Descriptions	3	Jack Bailey Mark Board Edward Thomas
NEV-SAFETY-142	Standard Titanium Grades Considered	3	Gerald Gordon David Shoesmith David Enos Michael Anderson
NEV-SAFETY-143	Available Drip Shield Design Information	3	Michael Anderson Don Beckman Edward Thomas
NEV-SAFETY-144	Drip Shield Failure Mechanisms	3	Clifford Hansen Michael Gross Dave Enos John (Art) McClure
NEV-SAFETY-145	Drip Shield Specifications	3	Michael Anderson Don Beckman Michael Gross
NEV-SAFETY-146	Reliance on Preliminary or Conceptual Design Information	3	N/A (Legal)
NEV-SAFETY-147	Evaluation of Data Used in Drip Shield Failure Probability	3	John (Art) McClure Clifford Hansen Edward Thomas Michael Anderson
NEV-SAFETY-148	Evaluation of Computational Procedure Used in Drip Shield Failure Probability	3	John (Art) McClure Clifford Hansen
NEV-SAFETY-149	Deviations in Design and Waste Emplacement	3	N/A (Legal)
NEV-SAFETY-150	Basaltic Magma Melting Depth	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-151	Time Span of Basaltic Volcanism	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-152	Focus on Upper Crustal Extension Patterns	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-153	Exclusion of Death Valley from Volcanism Calculations	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-154	Igneous Event Probability for 10,000 Years and 1,000,000 Years	3	Frank Perry Kevin Coppersmith

Attachment A
Case Management Order #2 Appendix With DOE Party Witnesses Added

Contention Label	Contention Name	SER Vol.	DOE Party Witness(es)
NEV-SAFETY-155	11-Million Year vs. 5-Million Year Volcanism Data	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-156	Alternative Igneous Event Conceptual Models	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-157	Igneous Event Data in the TSPA	3	Frank Perry Kevin Coppersmith Clifford Hansen
NEV-SAFETY-158	Geophysical Data in DOE's Volcanic Model	3	Frank Perry Kevin Coppersmith
NEV-SAFETY-159	Propagation of Conceptual and Parametric Uncertainties through the Safety Assessment	3	Clifford Hansen David Sevougian Peter Swift Jon Helton
NEV-SAFETY-160	Probability Density Functions Used in the TSPA	3	Clifford Hansen Peter Swift Cedric Sallaberry
NEV-SAFETY-161	Critical Role of Drip Shield	3	N/A (Legal)
NEV-SAFETY-162	Drip Shield Installation Schedule	3	N/A (Legal)
NEV-SAFETY-163	Screening of Near-Field Criticality	3	Edward Thomas Michael Anderson John Wagner John (Art) McClure
NEV-SAFETY-164	Aggregation of Probability Distributions	3	Kevin Coppersmith
NEV-SAFETY-165	Saturated Zone Expert Elicitation	3	Kevin Coppersmith
NEV-SAFETY-166	Probabilistic Seismic Hazard Analysis Expert Elicitation	3	Kevin Coppersmith
NEV-SAFETY-167	Probabilistic Volcanic Hazard Analysis Expert Elicitation	3	Kevin Coppersmith
NEV-SAFETY-168	Retrieval Practicality	3	Jack Bailey Edward Thomas
NEV-SAFETY-169	Deferred Retrieval Plans	3	N/A (Legal)
NEV-SAFETY-170	Conservatisms and the PMA	3	Clifford Hansen
NEV-SAFETY-171	PMA and QA	3	N/A (Legal)
NEV-SAFETY-172	Inspection and Verification of TAD	3	Michael Ulshafer
NEV-SAFETY-173	Emplacement Drift Monitoring	3	Jack Bailey Ernest Hardin Edward Thomas
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	Frank Perry David Lechel Jane Summerson Joseph Rivers
WHI-NEPA-002	Failure of Environmental Impact Statements to Fully Disclose the Consequences of Atmospheric Transport of Radionuclides in Volcanic Gases	3	Frank Perry David Lechel Jane Summerson Joseph Rivers
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	Frank Perry David Lechel Jane Summerson Joseph Rivers
WHI-NEPA-004	Failure of Environmental Impact Statements to Discuss Means to Mitigate diverse Impacts of Atmospheric Transport of Radionuclides in Volcanic Gases	3	Frank Perry David Lechel Jane Summerson Joseph Rivers

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Anderson, Michael	NEV-SAFETY-082, 098, 124, 125, 126, 127, 128, 129, 130, 133, 142, 143, 145, 147, 163	Relevant aspects of the manufacturing and design of drip shields.	None
Andrews, Robert	NEV-SAFETY-113, 114	Groundwater flow and radionuclide transport conceptual model, parameter and data uncertainty associated with the infiltration model, the unsaturated zone flow and transport models and the saturated zone flow and transport models, the significance of uncertainty in the precipitation characterization (data, parameter and model) on the estimation of net infiltration and unsaturated zone flow.	None
Arnold, Bill	NEV-SAFETY-115, 116, 117	Hydrogeology, groundwater contaminant transport, and numerical modeling of groundwater flow and contaminant transport, and saturated zone groundwater flow and transport on the Yucca Mountain Project.	None
Bailey, Jack	CLK-SAFETY-02; NEI-SAFETY-06, NEV-SAFETY-048, 092, 099, 110, 123, 131, 134, 136, 140, 141, 168, 173	Relevant aspects of the following subject matter: Repository Operations, Operational Controls, Subsurface Design, Waste Package and Drip Shield Design, Retrieval Plans and Activities, Waste Receipt, and TAD Design.	None
Ballinger, Ronald	NEV-SAFETY-81, 83, 84, 89, 90, 91, 94, 97, 107	Localized corrosion, stress corrosion cracking, environmental effects on materials behavior.	Note: CV and Publication will be provided later, due to a family emergency with Witness
Beckman, Don	NEV-SAFETY-128, 129, 143, 145	Relevant aspects of the manufacturing, design and quality assurance requirements for drip shields.	None
Birkholzer, Jens	NEV-SAFETY-48, 52, 63, 64, 77, 95, 96	Thermal-hydrological processes; thermal and ambient seepage.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Board, Mark	NEV-SAFETY-121, 122, 131, 136, 137, 141	Rock engineering and geomechanics.	State of Illinois, Dept. of Transportation vs Vulcan Materials Corporation
Brady, Pat	NEV-SAFETY-56, 58, 59, 92, 99, 111, 112	Aquatic chemistry, environmental transport, and the chemical degradation of silicate.	None
Bryan, Charles	NEV-SAFETY-43, 49, 55, 57, 60, 67, 68, 70, 72, 73, 78, 79, 80, 86, 88, 91, 93, 100, 106, 107, 108, 109	Near-field and in-drift chemical environment, near-field chemistry model and seepage evaporation model; dust deliquescence on the waste package surface; unsaturated zone minerology and pore water chemistry.	None
Coppersmith, Kevin	CLK-SAFETY-3, 4, 5, 6, 7, 8, 9, 10, 11; NEV-SAFETY-150, 151, 152, 153, 154, 155, 156, 157, 158, 164, 165, 166, 167; INY-SAFETY-3	Expert elicitation methodology used for both the PVHA (CRWMS M&O 1996) and the PVHA-U (SNL 2008) studies, including the datasets, hypotheses, and other information that was provided to the experts for their consideration; and aspects of the expert elicitation methodology used for the SZEE, PVHA, and PSHA studies.	None
Damjanac, Branko	NEV-SAFETY-121, 122	Geotechnical engineering, specifically rock mechanics, and modeling of underground and surface excavations in rock and assessing their stability under variety of loading conditions.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Enos, David	NEV-SAFETY-68, 69, 75, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91, 92, 94, 96, 97, 98, 99, 100, 105, 106, 107, 124, 125, 126, 127, 142, 144	Aqueous and atmospheric corrosion of engineering materials (mostly metals – iron based alloys, nickel based alloys, titanium based alloys, aluminum based alloys, copper based alloys) both from an experimental as well as theoretical basis; general and localized corrosion; environmentally assisted cracking (SCC, HE, etc.); microbiologically influenced corrosion; and atmospheric corrosion. Relevant areas of metallurgy such as; physical metallurgy and joining techniques (i.e., welding) of iron based alloys, nickel based alloys, titanium based alloys, aluminum based alloys, and copper based alloys. In the area of materials aging: assessments of the impact of materials aging on the function of complex, high consequence systems. Materials involved range from a variety of metals (stainless and carbon steels, nickel alloys, copper, etc.) and polymeric materials (encapsulants, protective coatings, staking compounds, etc.).	None
Fairhurst, Charles	NEV-SAFETY-121, 122	Rock mechanics in general; drift degradation; in situ stress state at Yucca Mountain; and seismic effects on stability of excavations.	None
Finsterle, Stefan	NEV-SAFETY-50, 61, 62, 65, 66	Ambient seepage; inverse modeling of nonisothermal multiphase flow systems; fracture and unsaturated zone hydrology; optimization; geostatistics; and related test design and data analysis.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Francis, A.J.	NEV-SAFETY-60, 71, 73, 74, 75, 76	Microbial impacts on radionuclide mobility and stability of radioactive (low-, intermediate-, and high-level radioactive) wastes disposed of in shallow-land burial grounds, radioactive waste repositories including transuranic (TRU) wastes. Microbial transformations of radionuclides and toxic metals: interactions of microorganisms with actinides and other radionuclides and toxic metals; mechanisms of mobilization and immobilization of uranium, plutonium, technetium and other radionuclides and toxic metals in wastes, contaminated soils and materials; biotransformation of radionuclide/metal-organic complexes and chelating agents; remediation of radionuclide and toxic metal contaminated soils and wastes; and Nitrogen and carbon transformations and cycling in the terrestrial and aquatic environments.	None
Gordon, Gerald	NEV-SAFETY-80, 81, 87, 93, 97, 98, 101, 102, 103, 104, 106, 124, 125, 126, 127, 129, 142	Physical metallurgy; corrosion and light water reactor and nuclear waste repository materials performance and high temperature materials performance.	None
Gross, Michael	NEV-SAFETY-144, 145	Incorporation of structural response calculations into probabilistic risk assessments.	None
Hansen, Clifford	NEV-SAFETY-20, 67, 107, 116, 117, 144, 147, 148, 157, 159, 160, 170, NEI-SAFETY-6; CLK-SAFETY-10	Conceptual structure of performance assessments; representation and propagation of uncertainty; computational implementation of performance assessment structure and models; and analysis of performance assessment results.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Hardin, Ernest	NEV-SAFETY-51, 52, 62, 63, 64, 65, 66, 70, 105, 136, 138, 140, 173; JTS-NEPA-3	General hydrology (including unsaturated flow and transport); aqueous geochemistry; site characterization; in situ testing; and simulation modeling of ambient and thermally driven coupled processes in geologic media.	None
Helton, Jon	NEV-SAFETY-159	Uncertainty and statistical analysis; overall computational structure for the TSPA including expected (over aleatory uncertainty) and mean (over aleatory and epistemic uncertainty) dose to the RMEI.	None
Houseworth, James	NEV-SAFETY-35, 42, 43, 44, 45, 46, 49, 56, 113, 114, 115	Yucca Mountain unsaturated zone flow model and unsaturated zone transport process model; implementation of the models in TSPA, including the conceptual models and modeling assumptions, mathematical implementation, laboratory and field data, model parameterization, and model validation.	None
Howard, Robert	NEI-SAFETY-6, CLK-SAFETY-2	Event probabilities; features, events, and processes (FEPS); and the role and function of the drip shield in the postclosure safety analyses.	None
Jarek, Russell	NEV-SAFETY-72	Yucca Mountain repository environmental conditions (e.g., seepage and dust compositions and physical evolution) and their impact upon the potential for localized corrosion and effect on general corrosion processes of the engineered barrier materials.	None
Knapp, Kathryn	NEV-SAFETY-196, NEV-SAFETY-139	Relevant Physical Protection and Emergency planning issues	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
LeCain, Gary	NEV-SAFETY-44, 45	Qualification of the hydrologic characteristics of the fractures, matrix, and faults at Yucca Mountain; studies to quantify fracture permeability, infiltration in stream channels, and flow in the major faults at Yucca Mountain.	None
Lechel, David	INY-NEPA-006, NEV-NEPA-018, WHI-NEPA-001, 002, 003, 004	Historical/regulatory basis for the environmental analyses and related elements, as well as the associated analyses of DOE's NEPA documents.	None
Levitt, Daniel	NEV-SAFETY-14, 15, 17, 18, 30, 32, 33, 34, 35, 54	Climate; coupled atmospheric-surface-subsurface interactions of energy and water; surface water, precipitation, infiltration, and vadose zone modeling; micrometeorological and vadose zone monitoring and instrumentation.	None
Liu, H. H.	NEV-SAFETY-47, 53, 54	Fracture hydrology and vadose zone hydrology; modeling and analysis reports in the area of UZ flow modeling on the Yucca Mountain Project.	None
Marshall, Brian	NEV-SAFETY-43, 49, 55, 57, 72, 73	Isotope geochemistry, including strontium and radiocarbon measurements; modeling of strontium isotopes in pore water; isotopic and geochronologic data that bear on travel time in the unsaturated zone and constraints on fracture-matrix interaction; pore water chemistry, including organic components; screening of pore-water data utilized in the LA and the limitations that may arise from incomplete chemical analysis or inadequate sampling locations and methods; implications of microbial activity for nitrate concentrations; chemical variability of pore water in the Topopah Spring Tuff, dust chemistry and accumulation rates; origin of chemical components in water collected from an unventilated portion of the underground tunnels.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
McClure, John (Art)	NEV-SAFETY-129, 144, 147, 148, 163	Modeling of various phenomena associated with long-term criticality concerns; criticality analyses, criticality consequence analyses, and FEPs (features, events, and processes) screening analyses for probability of criticality for spent nuclear fuel in waste containers for the Monitored Geologic Repository.	None
Payer, Joseph	NEV-SAFETY-69, 75, 83, 84, 85, 90, 94, 97, 101, 102, 103, 104	Corrosion, materials selection, materials performance, metallurgy, electrochemistry, and performance assessment.	None
Perry, Frank	NEV-SAFETY-150, 151, 152, 153, 154, 155, 156, 157, 158; CLK-SAFETY-3, 4, 5, 6, 7, 8, 9, 10, 11; INY-SAFETY-3; INY-NEPA-6; WHI-NEPA-1, 2, 3, 4	Geology, igneous petrology, volcanic hazards, volcanology, isotope geochemistry, mantle processes and geochemistry related to basalt generation, regional tectonic frameworks related to volcanism, and geology of volcanic fields.	None
Price, Ronald	NEV-SAFETY-121	Laboratory testing and analysis of tuffaceous rocks from Yucca Mountain and vicinity; mechanical properties of the intact tuffs from Yucca Mountain, including variability in side-by-side samples of tuff, as well as the range in the tuff anisotropy and the effects of porosity variability, sample size, temperature, pressure, water saturation, strain rate on the mechanical behavior of the intact samples of tuff.	None
Reimus, Paul	NEV-SAFETY-58, 59, 113, 114, 115, 116, 117	Radionuclide transport in the environment, especially saturated groundwater systems, including processes such as advection, sorption, complexation, matrix diffusion, and colloid-facilitated transport.	None
Rivers, Joseph	WHI-NEPA-001, 002, 003, 004	Analytical and administrative process used to develop the NEPA documents	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Sallaberry, Cedric	NEV-SAFETY-17, 27, 160	Uncertainty characterization and sensitivity/uncertainty analyses for safety calculations.	None
Sassani, David	NEV-SAFETY-57, 69, 86, 87, 88, 89, 92, 93, 94, 95, 96, 99, 105, 106, 114, 116, 117	Geochemistry and coupled processes; waste form behavior; geochemical need for drip shields; geochemical and chemical conditions within the unsaturated zone; near-field environment, in-drift chemistry.	None
Sevougian, David	NEV-SAFETY-115, 159	TSPA modeling and analysis; reactive transport modeling; conservatism/nonconservatisms in the suite of performance assessment models; incorporation of uncertainties and scenario classes in TSPA; and use of sorption coefficients in transport modeling.	None
Sharpe, Saxon	NEV-SAFETY-18; JTS-NEPA-8	Biotic, hydrologic, and climatic system interactions, primarily in the desert southwest. In particular, how closely hydrology and climate are linked and how they affect individual species and communities.	None
Shoesmith, David	NEV-SAFETY-78, 80, 81, 82, 85, 89, 91, 98, 101, 102, 124, 142	Nuclear fuel chemistry and waste container corrosion under storage and disposal conditions; redox chemistry of uranium dioxide; application of scanning electrochemical microscopy to the kinetic analysis of local corrosion processes on both passive and active metals and non-metals; redistribution of alloying and impurity elements during the localized corrosion of alloys and oxides and their influence on corrosion damage patterns; in-situ coupling of neutron reflectometry and electrochemical methods for the non-destructive analysis of sub-surface interfaces; development of deterministic and probabilistic models for corrosion processes.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Stein, Joshua	NEV-SAFETY-16, 20, 21, 22, 23, 25, 26, 27, 28, 29, 31, 36, 37, 38, 39, 40, 46; JTS-NEPA-5	Conceptual, analytical, and numerical model development and implementation and uncertainty and sensitivity analyses; infiltration model used for the Yucca Mountain License Application, including calculations of evapotranspiration, streamflow, snowpack, and soil moisture movement.	None
Stephens, Daniel	NEV-SAFETY-14, 15, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 40	General topic of hydrogeology, vadose zone processes, groundwater recharge, and contaminant fate and transport.	See CV
Summerson, Jane	INY-NEPA 006; JTS-NEPA 003, 005, 008; NEV-NEPA-018; WHI-NEPA-001, 002, 003, 004	Development of the relevant NEPA analysis and documents.	None
Swift, Peter	NEV-SAFETY-159, 160	Methods used to assure that the treatment of potentially relevant features, events, and processes in the TSPA was comprehensive and that significant uncertainties were not omitted from the analysis by this process. Overall design of the TSPA and the relative sensitivity of the results to uncertainty in individual input parameters.	None
Thomas, Edward	NEV-SAFETY-077, 110, 123, 130, 131, 132, 133, 134, 136, 137, 138, 140, 141, 143, 147, 163, 168, 173	Drift Seepage, Drip Shield Emplacement and Monitoring. Ground Support, Retrieval Plans and Activities.	None
Ulshafer, Michael	NEV-SAFETY-172	Inspection and Verification of TADs.	None

ATTACHMENT B

INITIAL DOE PARTY WITNESS LIST WITH GENERAL SUBJECT MATTER

Party Witness Name	Contention #s	General Subject Matter	Trial or Deposition Testimony (Prior Four Years)
Wagner, John	NEV-SAFETY-163	Criticality safety, burnup credit criticality safety for spent fuel storage, transport and disposal systems, reactor operations as they pertain to spent nuclear fuel characteristics, commercial nuclear fuels, and design and licensing of spent fuel storage, transport and disposal systems.	None
Wasiolek, Maryla	NEV-SAFETY-118, 119, 120	Radiological assessments, environmental transport of radionuclides; dosimetry; and biosphere, as discussed in the License Application.	None