



## *Nevada Site Specific Advisory Board* *Table of Contents*

**Full Board Meeting Handouts for  
Tuesday, November 10, 2015**

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# Frenchman Flat Chronology

- **1950s onward**
  - Geologic and hydrologic data collection and studies
- **1999 - 2001**
  - Phase I peer review
  - Revised investigation plan
    - Approved by State of Nevada Division of Environmental Protection (NDEP)
- **2001 - 2003**
  - Phase II site characterization studies
  - Five new boreholes in two clusters
  - 3-D seismic reflection survey
  - Multi-well aquifer test in central test area
- **2003 - 2010**
  - Data analysis and modeling reports
- **2010**
  - Phase II External Peer Review
    - Panel of recognized experts in the geology, geophysics, nuclear chemistry and hydrology/ hydrological modeling with experience in planning and completing projects in applied science.
    - Four-day workshop and field trip kicked-off the six-month process
    - *“The [peer review] team notes that the sophistication and complexity of the modeling evaluations that have been conducted are state-of-the-practice analyses that go far beyond those conducted at other contaminated sites in the United States. The peer review team is of the opinion that potential processes that could affect the migration of radionuclides in groundwater have been thoroughly evaluated.”*  
  
*“...the peer review team strongly believes that the UGTA Activity should proceed to the next stage.”*
- **2011**
  - CADD/CAP document approved by NDEP
- **2012**
  - Drilled model evaluation Wells ER-5-5 and ER-11-2
- **2013 - 2014**
  - Additional data collection and model evaluation
  - NDEP accepted the Model Evaluation Report and approved proceeding to CR stage
    - First UGTA CAU approved to move to closure stage and to reach this major milestone
- **2015**
  - Developed closure approach and report



# Frenchman Flat Long-Term Monitoring Plan (Closure Report)



**Irene Farnham, Navarro**  
**and Nicole DeNovio, Golder Associates, Inc.**  
Nevada Site Specific Advisory Board (NSSAB)  
November 10, 2015



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# NSSAB Work Plan Item #5

The NSSAB will provide a recommendation, from a community perspective, as to if the draft plan meets communities' expectations and if there are any recommended changes



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# Outline

- Frenchman Flat background
- Federal Facility Agreement and Consent Order (FFACO) Regulatory Strategy stages
- Closure Report purpose
- Contaminant, use-restriction, and regulatory boundaries
- Groundwater Monitoring Program
- Institutional Controls



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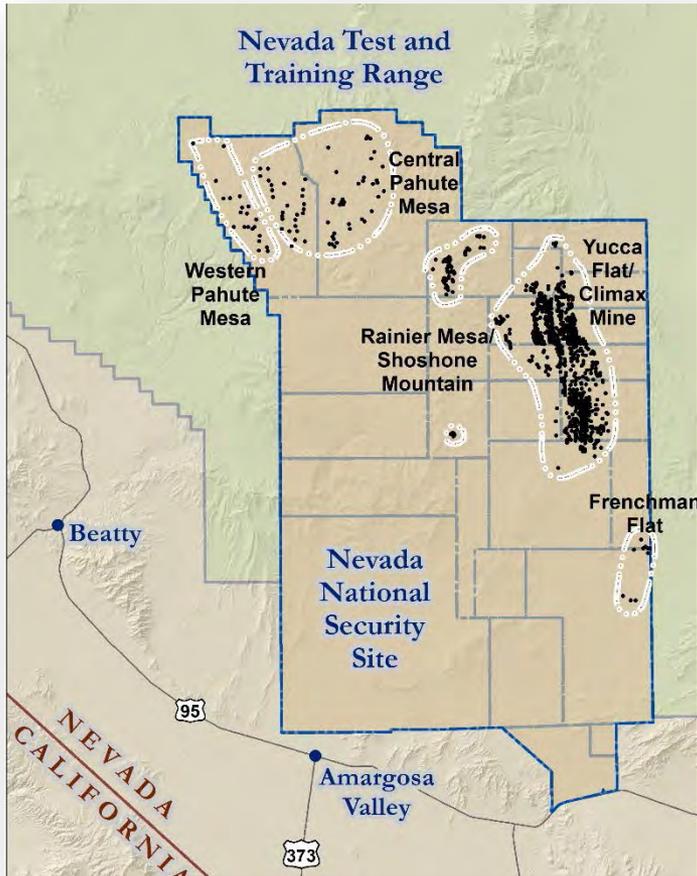
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# Frenchman Flat

## Corrective Action Unit (CAU) 98



- One of five Underground Test Area (UGTA) CAUs
- Ten underground nuclear detonations in alluvium (9) and volcanic (1) units
- Less than 20 kilotons
- 0.1 % of UGTA inventory
- Alluvial and shallow-volcanic aquifers
  - Dominant flow is horizontal from northwest to southeast
  - Groundwater flow is less than approximately three feet/year
- Closest public well is over 20 miles from CAMBRIC contaminant boundary



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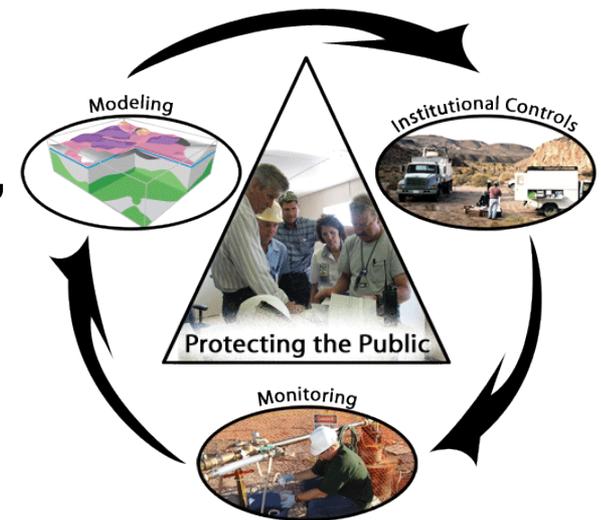
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# Corrective Action Strategy Background

- Defined in Appendix VI of the FFACO (1996, as amended)
- Assumes contaminant removal is not feasible with current technology
- Strategy is a combination of characterization and computer modeling, monitoring, and institutional control



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# FFACO Regulatory Strategy Stages

- **Corrective Action Investigation Plan (CAIP)**
  - Develop the plan
- **Corrective Action Investigation (CAI)**
  - Characterize site
  - Develop groundwater and contaminant transport models
- **Corrective Action Decision Document/Corrective Action Plan (CADD/CAP)**
  - Collect and evaluate new data to address key uncertainties and defend that the corrective action unit is acceptable for closure
- **Closure Report (CR)**
  - Negotiate use-restrictions and regulatory boundary
  - Establish institutional controls and requirements
  - Develop and implement long-term closure monitoring program



# Closure Report Purpose

- Summarize previous activities and conclusions that support CAU closure
- Describe the selected corrective action
- Establish long-term modeling objectives and requirements
- Present final contaminant boundaries, use-restriction boundaries, and regulatory boundaries
- Provide an implementation plan for long-term monitoring and well network maintenance
- Identify the approaches and policies for institutional controls



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# UGTA Boundaries

- Contaminant Boundary - Groundwater within this boundary is forecasted to exceed the Safe Drinking Water Act (SDWA) standards over 1,000 years
- Use-Restriction Boundary – Boundaries (based on contaminant boundaries) that require institutional controls that restrict access to contaminated groundwater
- Regulatory Boundary – Provide protection for the public and the environment from the effects of migration of radioactive contaminants



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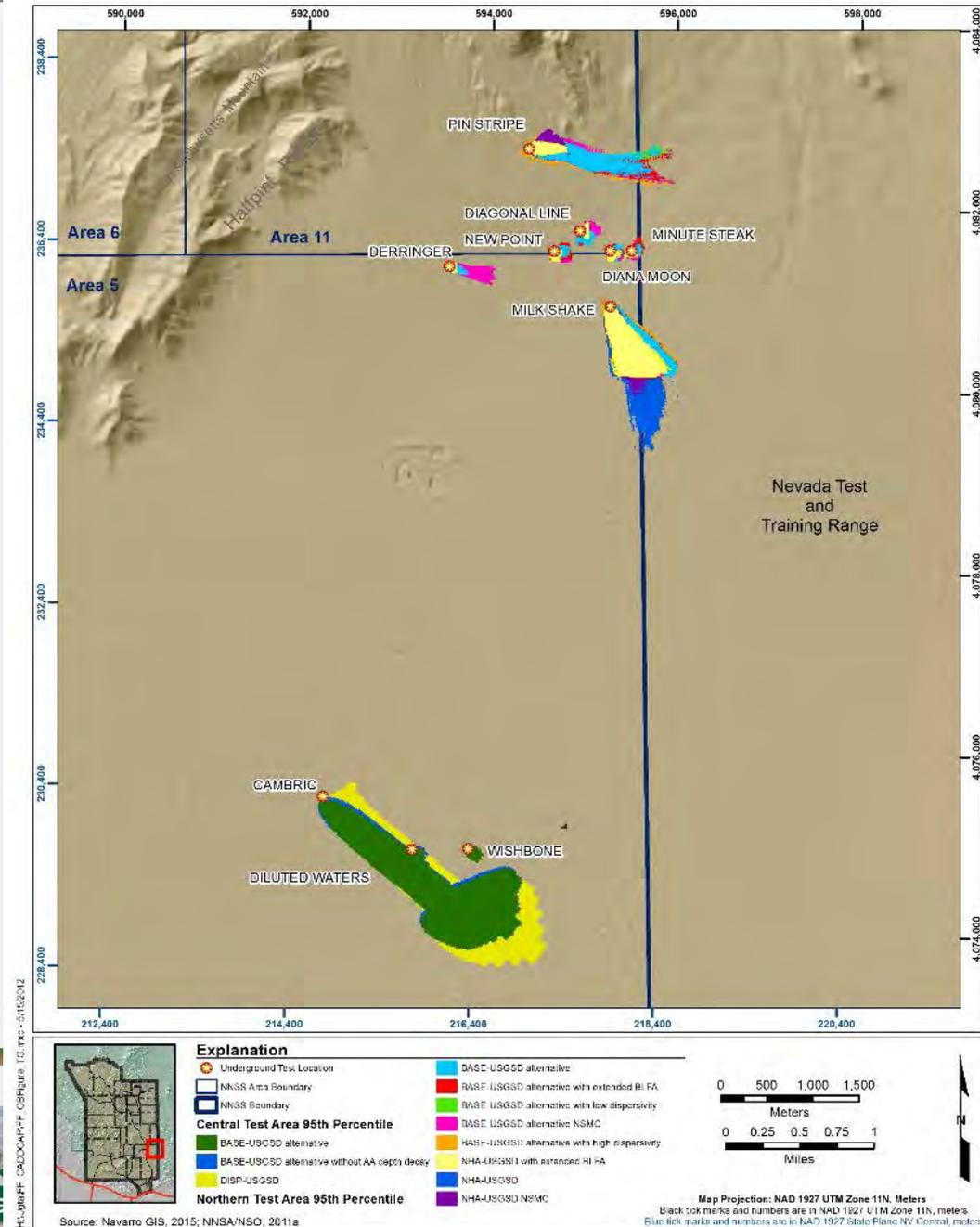
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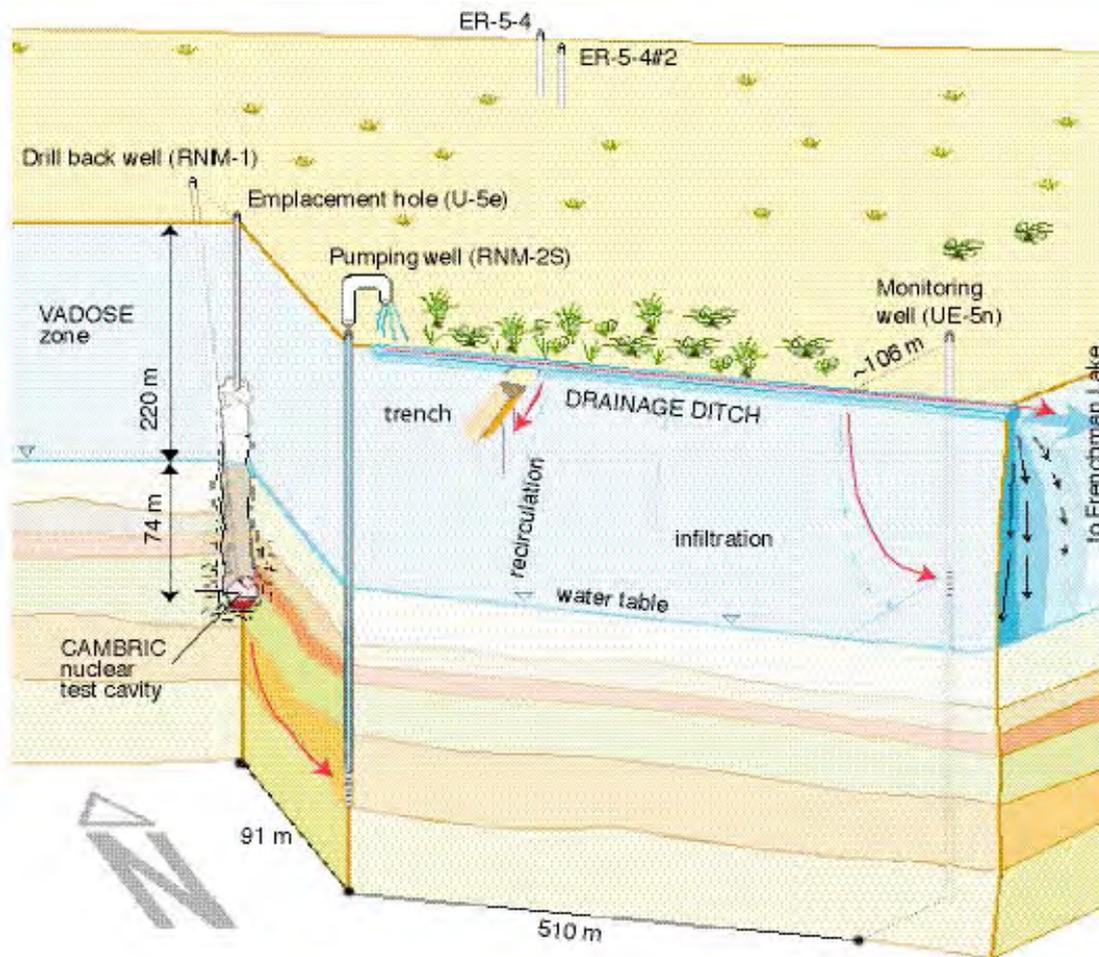
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# Initial Contaminant Boundaries (CAI)

- Forecasted contaminated groundwater from underground testing over 1,000 years
- Contaminated groundwater is defined as water exceeding the SDWA maximum contaminant levels
  - SDWA for tritium is 20,000 picocuries per liter
- Established initially from modeling studies of flow and transport



# CAMBRIC Radionuclide Migration Project



- Artificial gradient between Wells RNM-1 and RNM-2S used to understand radionuclide migration away from the CAMBRIC cavity
- Pumped over two billion gallons of groundwater from Well RNM-2S (1975 and 1991)
- Water was discharged into ditch to transport to Frenchman Lake



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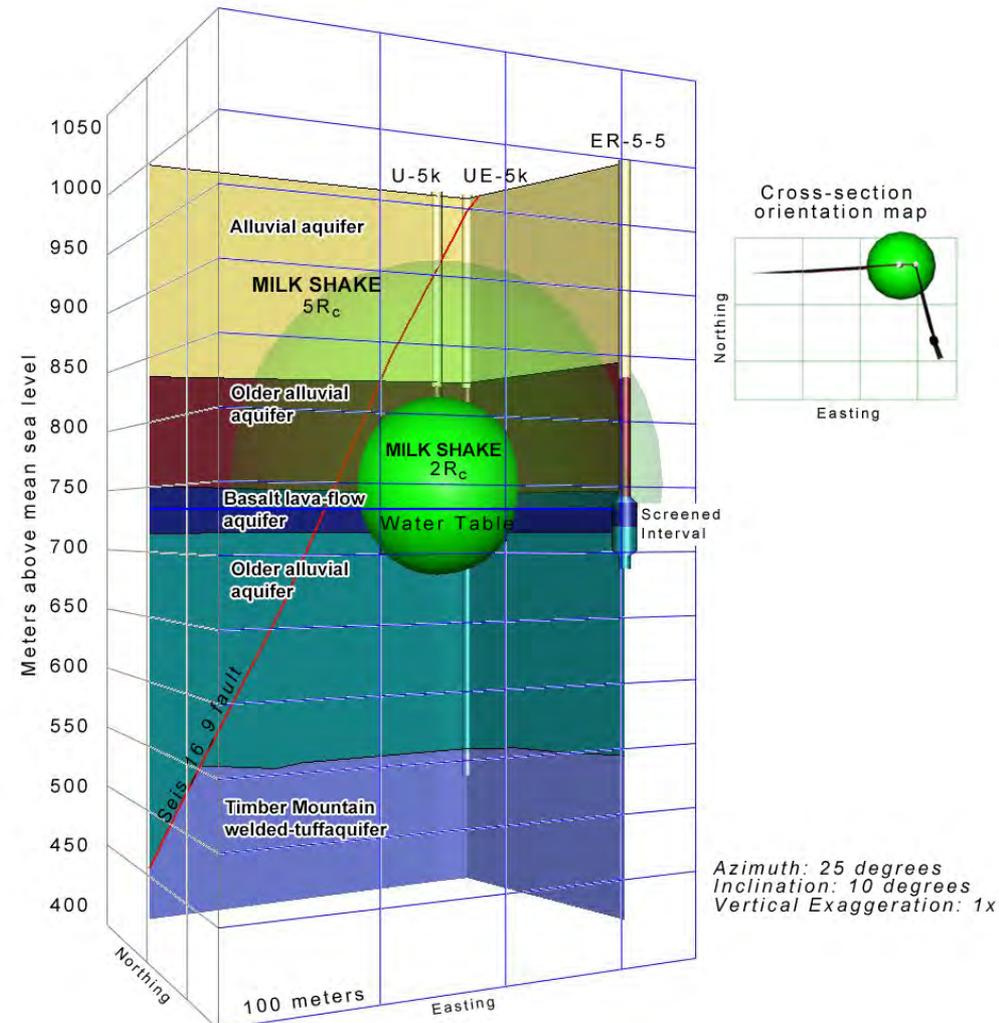
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# Well ER-5-5 Monitoring MILK SHAKE Test

- Tritium observed to be at least 10,000x lower than simulated by the computer models
- Observation of leading edge of the MILK SHAKE plume consistent with direction and magnitude of groundwater velocity calculated with high-quality, water-level monitoring data



Cavity radius is calculated using the maximum of the announced yield range in DOE/NV-209 (2000) and the equation in Pawloski (1999).



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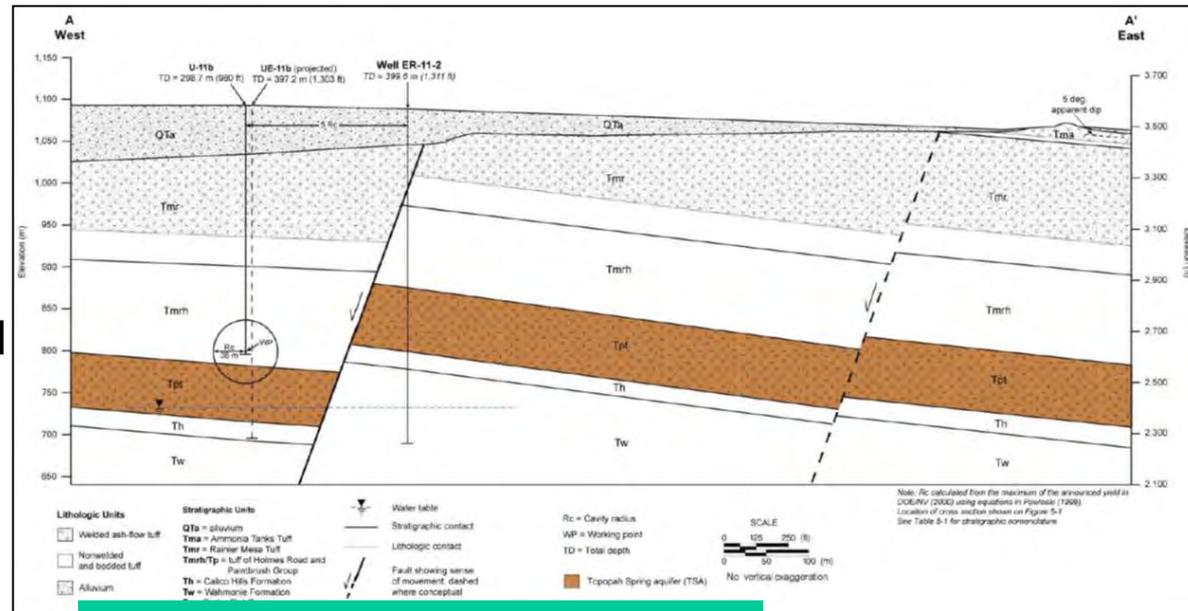
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# PIN STRIPE Evaluation

- Well ER-11-2 (model evaluation well) shows that the transport pathway for PIN STRIPE is not continuous - indicates that models have too much transport to the east
- New conceptual model was required
  - Honored the geology that limited contaminant migration to the east (toward the regional flow system)
  - Consistent with observed water levels that demonstrated a hydraulic barrier
- Flow and transport to the south and very slow because of rock properties

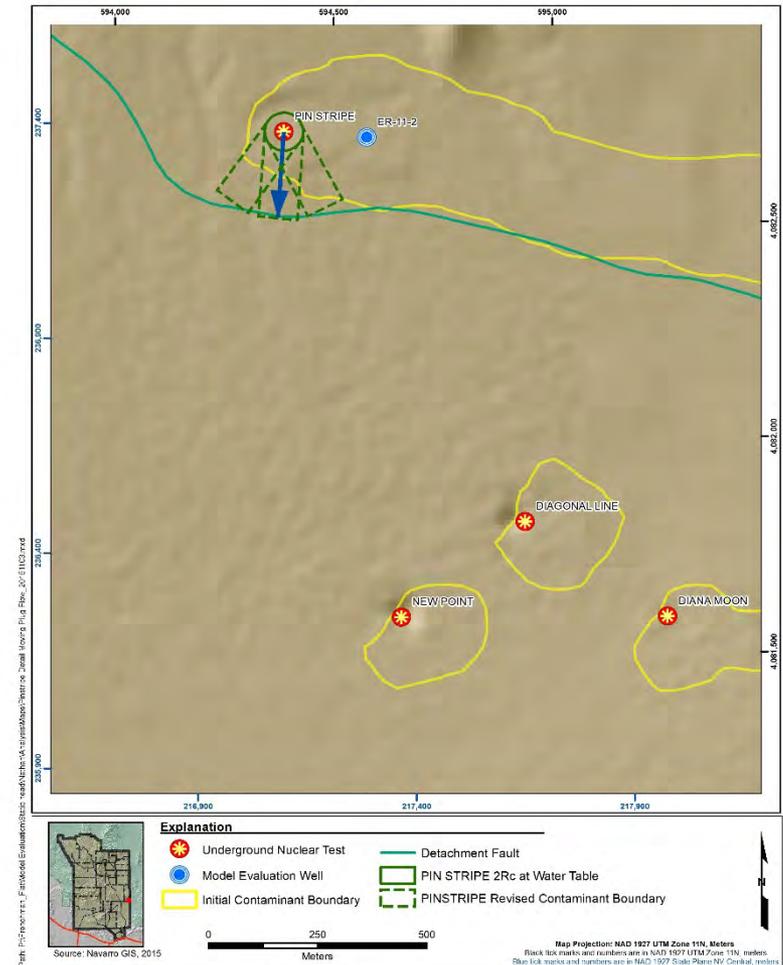


Cavity radius is calculated using the maximum of the announced yield range in DOE/NV-209 (2000) and the equation in Pawloski (1999).



# Refined PIN STRIPE Contaminant Boundary

- Based on refined conceptual model developed from Well ER-11-2 geologic data
- Contaminant boundary uncertainty includes:
  - Groundwater velocity and flow direction
- Approximated as two times the cavity radius ( $2R_c$ ) plus uncertainty intersecting the water table



Cavity radius is calculated using the maximum of the announced yield range in DOE/NV-209 (2000) and the equation in Pawloski (1999).



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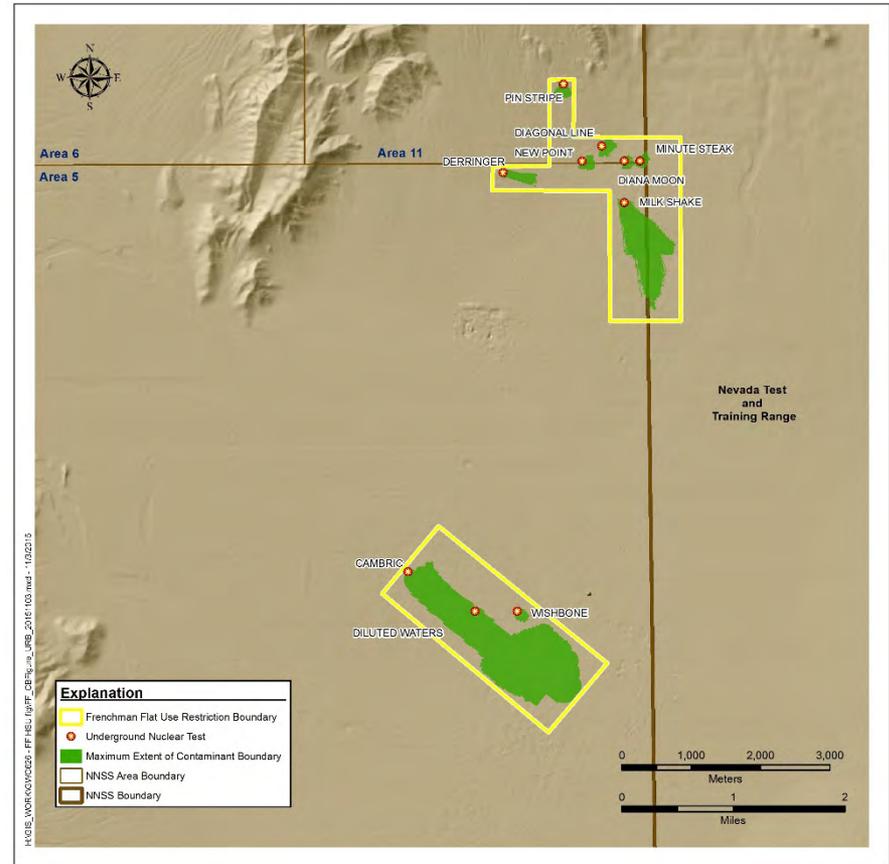
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# Use-Restriction (UR) Boundaries

- Annual UR verifications:
  - Is there drilling or new groundwater uses within and adjacent to the UR boundary that could conceivably impact the contamination boundary?
  - Are there any changes to site activities or site access?
  - Do monitoring data suggest that URs should be modified?



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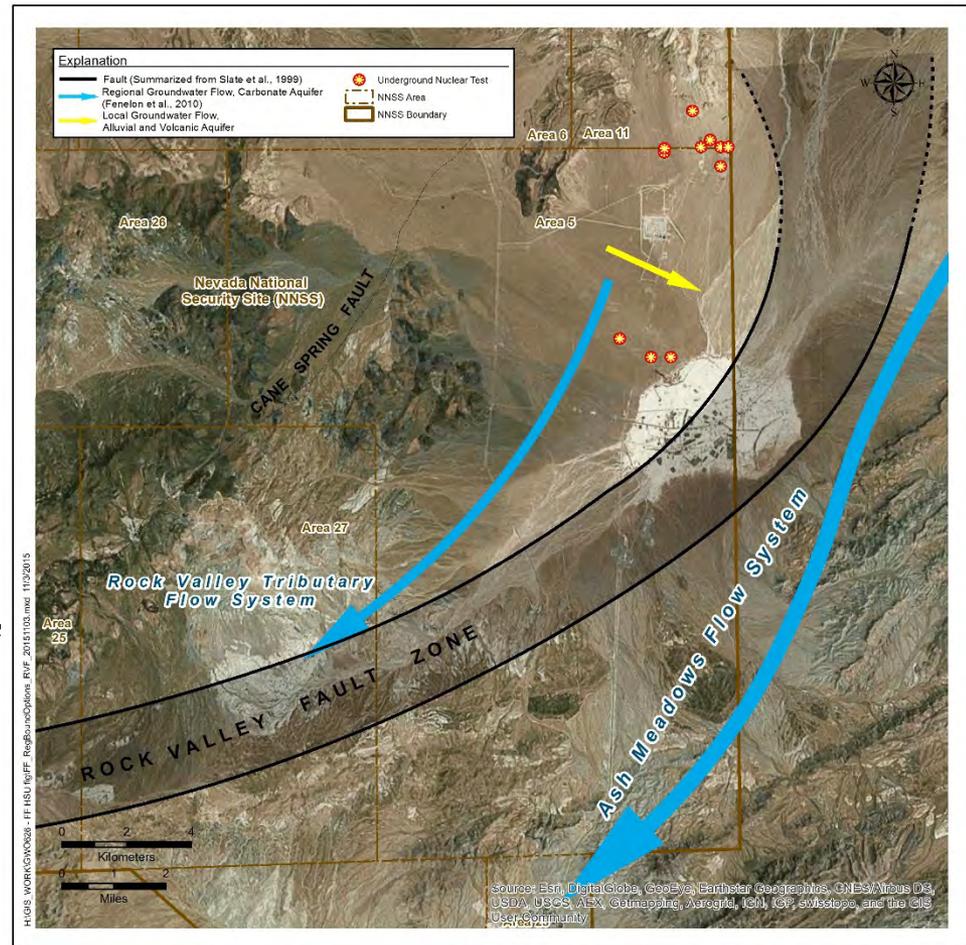
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# Groundwater Flow

- In the alluvial and volcanic aquifers:
  - Limited leakage into the lower carbonate aquifer occurs as the volcanic units thin and/or are offset by faults associated with the Rock Valley fault system
  - Vertical gradient in the shallow basin-fill units is approximately an order of magnitude less than the horizontal gradient; however, both gradients are very small
- Rock Valley fault system is the expected pathway of groundwater flow out of the basin



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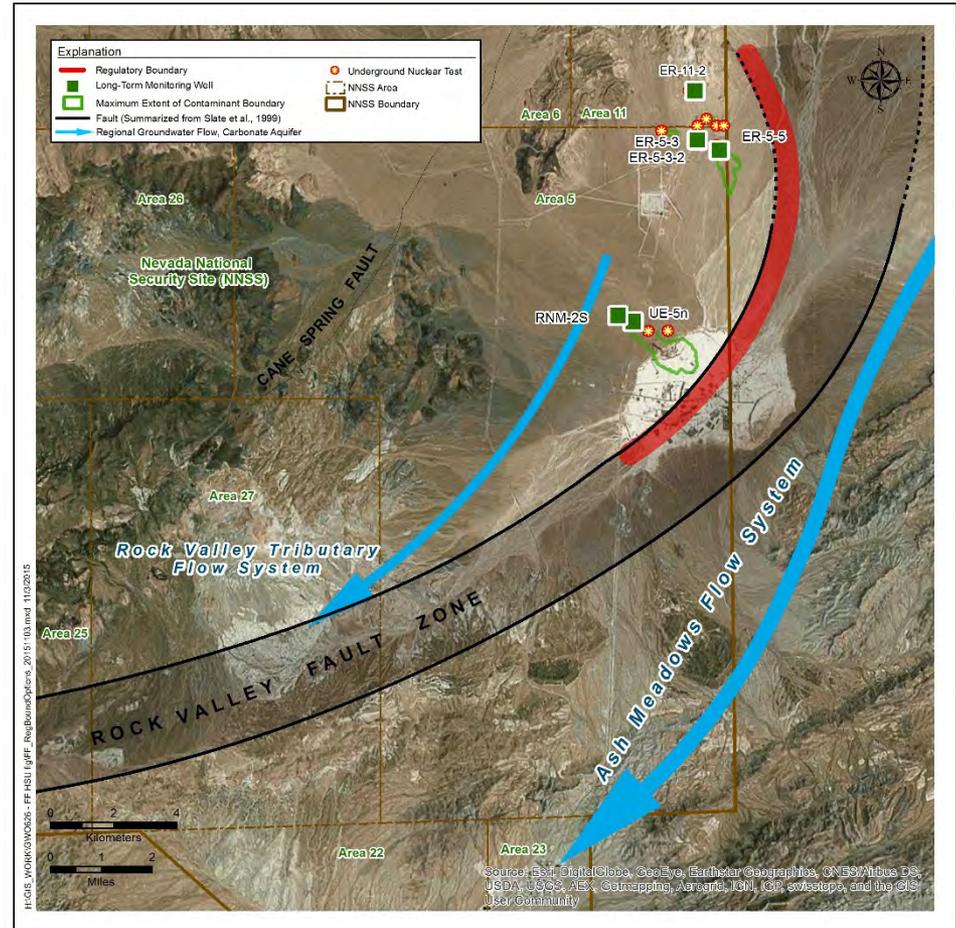
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# Regulatory Boundary

- Regulatory boundary objective is to protect potential receptors down gradient of the Rock Valley fault system from radionuclide contamination
  - 1,000-year contaminant boundaries are well within the regulatory boundary
  - Tritium will decay below SDWA levels within next 200 years
  - Other radionuclides have not been detected near SDWA levels except in the test cavities



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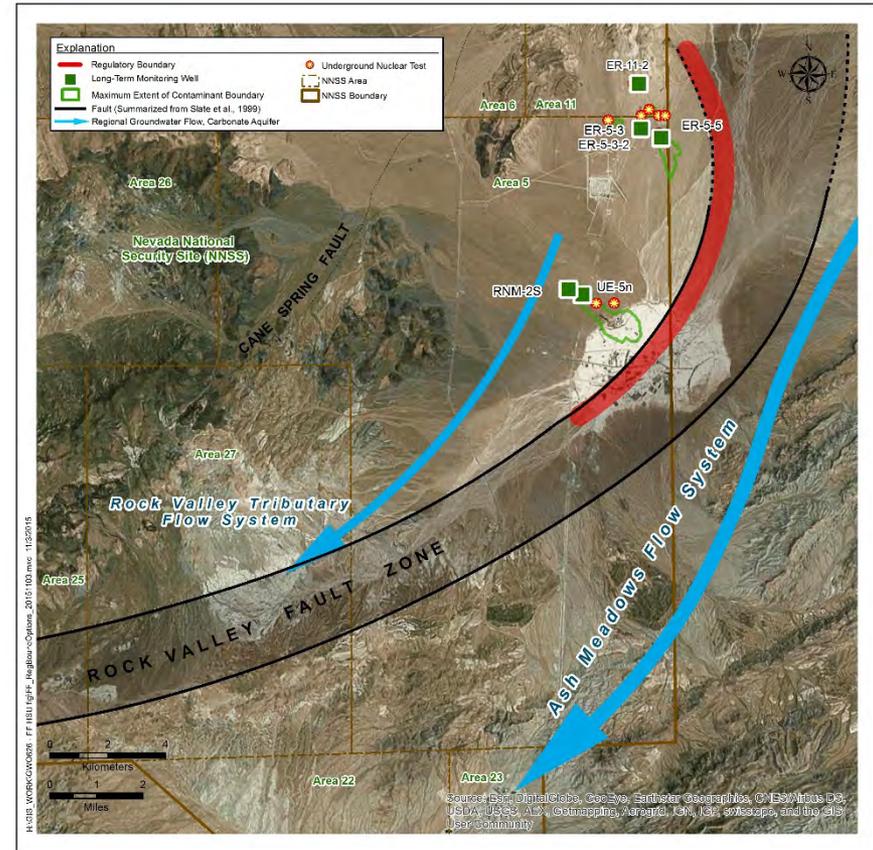
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# Regulatory Boundary (continued)

- If radionuclides reach this boundary, the Nevada Field Office will be required to submit a plan to the State of Nevada Division of Environmental Protection (NDEP), for approval, to ensure receptors down gradient are protected.
- Monitoring provides early and frequent status on contaminant migration
  - Monitoring program developed based on evaluations of over 50 years of characterization data and the groundwater flow and transport model results
  - Model was evaluated by Peer Review panel of national experts



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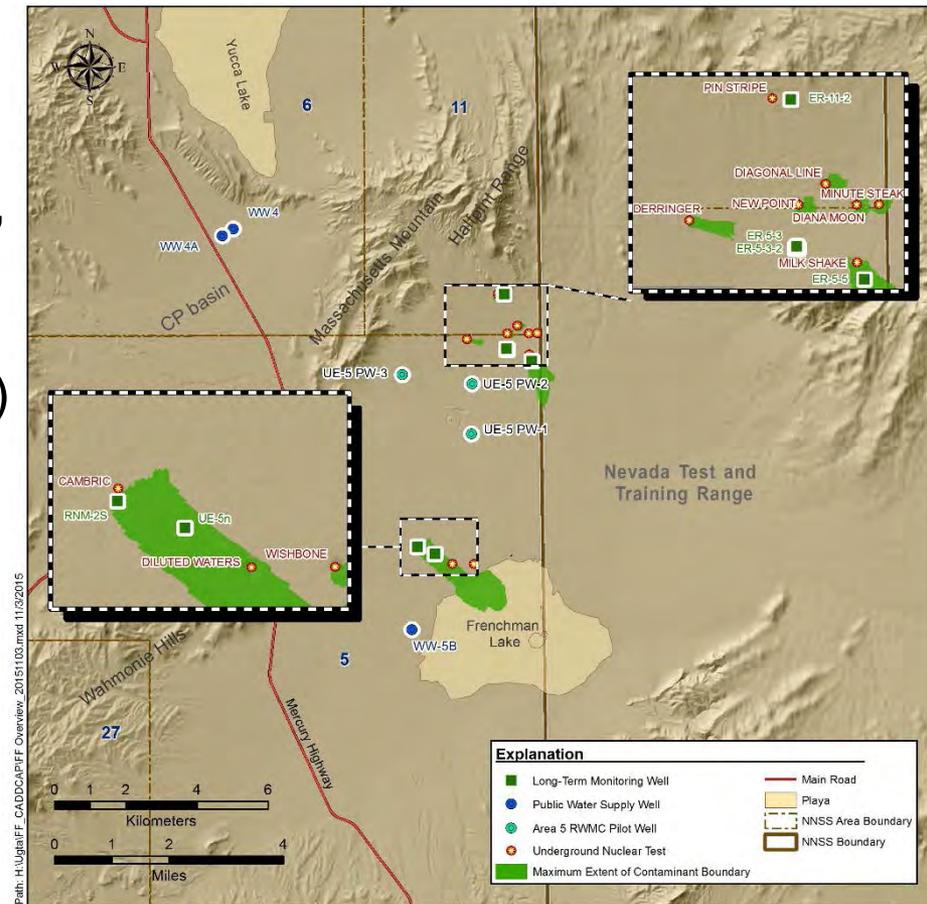
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# Long-Term Monitoring

- Six monitoring wells:
  - Three Wells (ER-5-3, ER-5-3#2, and ER-5-5) monitored for Tritium, Carbon-14, Chlorine-36, Technetium-99, Iodine-129, gamma emitters, metals
  - Two Wells (RNM-2S and UE-5n) monitored for Tritium, Carbon-14, Chlorine-36, Technetium-99, Iodine-129
  - One Well (ER-11-2) monitored for Tritium
- Monitoring wells sampled annually
- Periodic evaluations performed in consultation with NDEP



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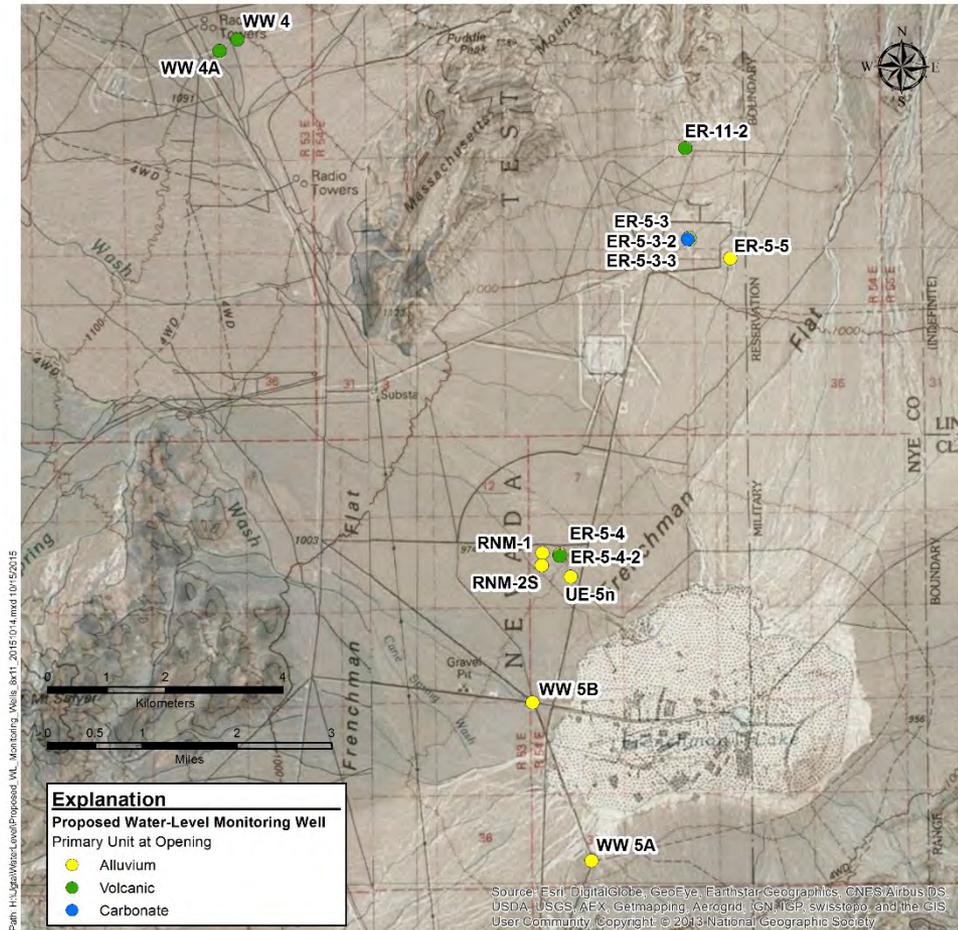
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# Long-Term Water-Level Monitoring

- Sixteen wells – 14 in Frenchman Flat Basin and two in CP Basin
  - CADD/CAP water-level evaluations
- Quarterly measurements for the first five years
  - Network and measurement frequency will be reevaluated after five years
- Well inspections will be concurrently performed
- Data entered into U.S. Geological Survey National Water Information System database



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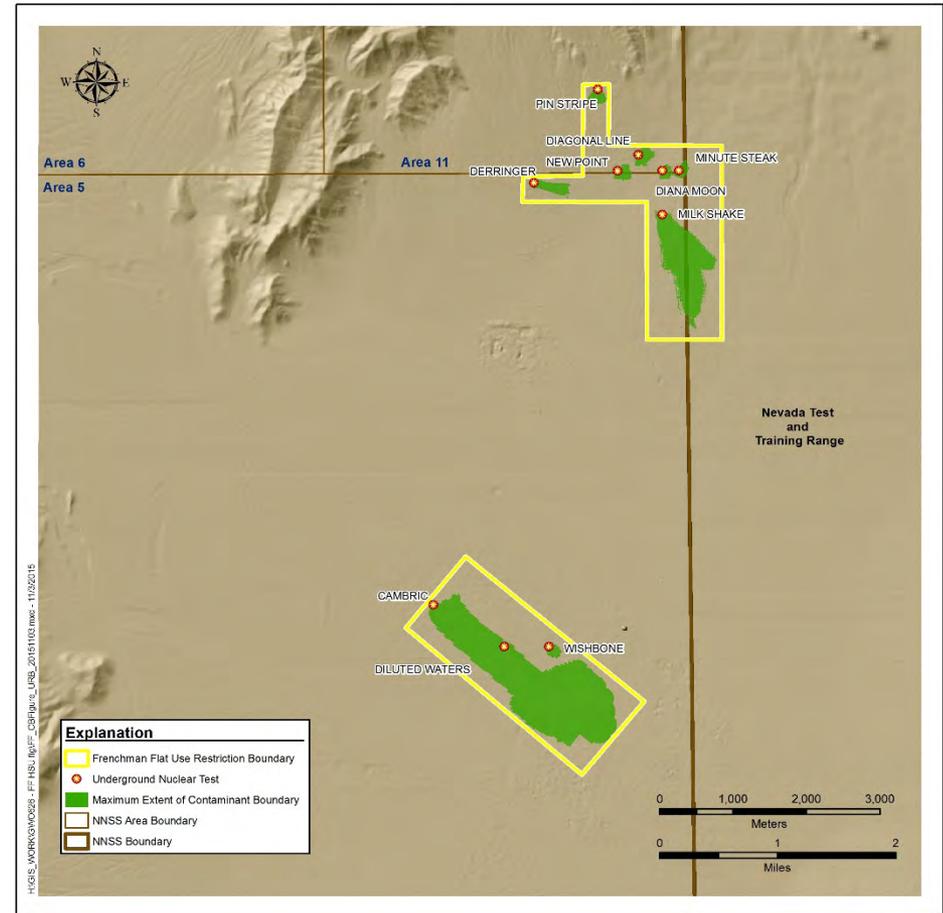
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# Institutional Controls

- Limit access to areas of potentially contaminated groundwater
- Future use of any land related to this CAU is restricted from any activity that may alter or modify the institutional controls as approved by NDEP, unless appropriate concurrence is obtained in advance
  - For example, surface/shallow subsurface may be used
- Monitored on an annual basis



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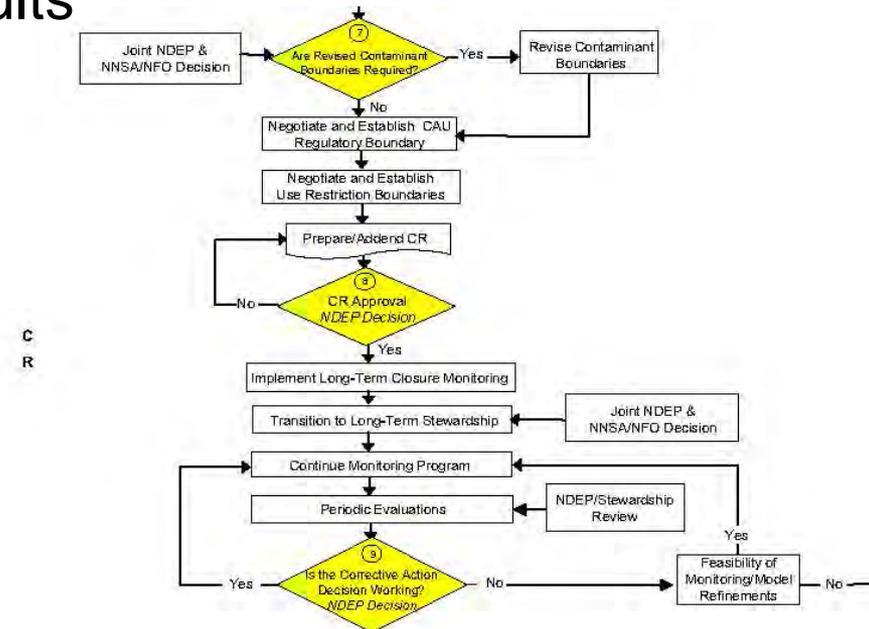
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# Periodic Evaluations

- Monitoring network inspections to verify well functionality and effectiveness
- Determine whether water-level data are consistent with the conceptual model and whether radiochemistry results are consistent with expected results
- Current land URs, processes and procedures are effective and protective of human health and the environment
- Determine if any new land use applications will threaten the effectiveness of the closure strategy



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# NSSAB Path Forward

- Tonight, NSSAB discusses recommended changes to the draft plan
  - NSSAB may choose to provide a recommendation to Department of Energy by tonight, or
  - NSSAB may choose to wait and continue to review and discuss the draft plan and provide a recommendation at the next meeting on January 20, 2016



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# Corrective Action Alternatives Recommendation for Corrective Action Unit 573



**Tiffany Lantow**

Soils Activity Lead

Nevada Site Specific Advisory Board (NSSAB)

November 10, 2015



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# NSSAB Work Plan Item 1

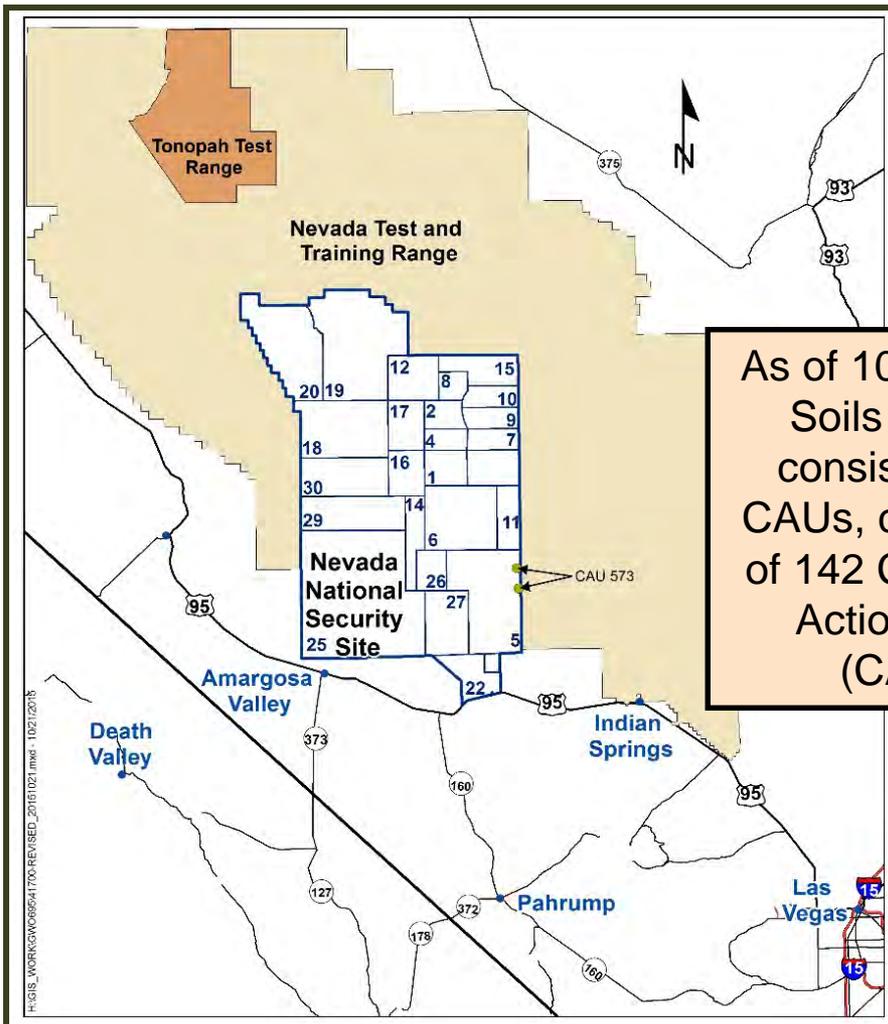
Provide a recommendation, from a community perspective, to the Department of Energy (DOE) on which corrective action alternative (closure in place or clean closure) should be selected for Corrective Action Unit (CAU) 573 – Alpha Contaminated Sites



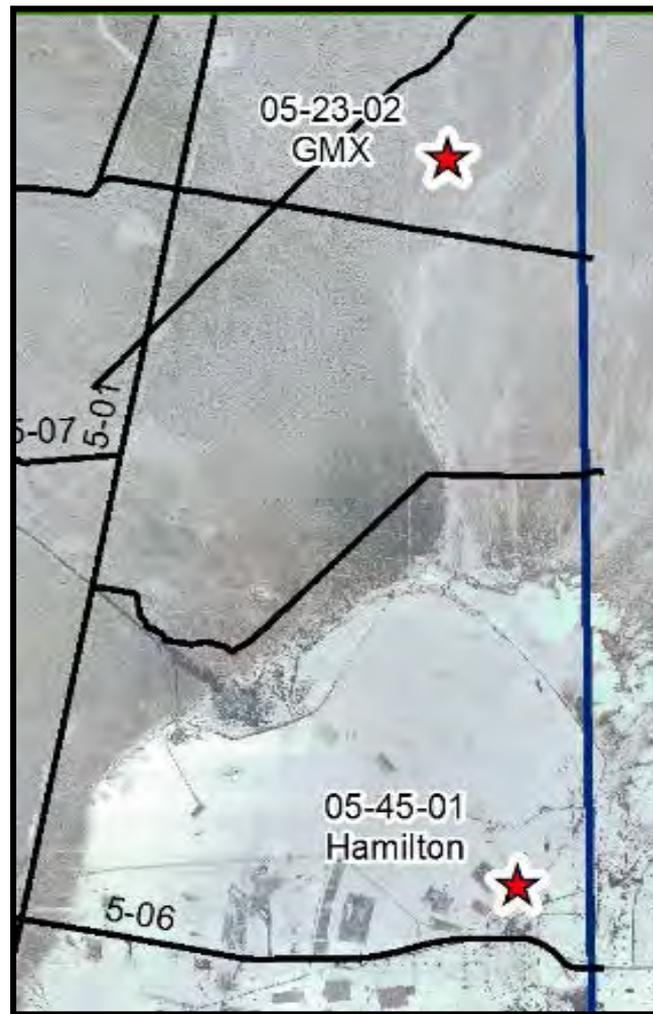
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# Location of CAU 573



As of 10/21/2015, Soils Activity consists of 31 CAUs, comprised of 142 Corrective Action Sites (CASs)



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# Two CASs in CAU 573

- **GMX:**

- Twenty-nine experiments involving metallic plutonium and high explosives conducted between December 1954 and February 1956
- Contamination is mainly Americium (Am)-241 and Plutonium (Pu)-239/240 as fine particles in soil and as discrete pieces of debris
- Contamination within High Contamination Area (HCA) assumed to exceed action levels
- Contamination outside HCA well below action levels
- Drainage - migration not detected



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# Two CASs in CAU 573

## (continued)

- **Hamilton:**

- One nuclear effects test with yield of 1.2 tons
- Conducted October 1958 as part of Operation Hardtack II on tower at a height of 50 feet
- Contamination is mainly Pu-239/240 and Am-241 as fine particles in soil and as discrete pieces of debris
- All contamination well below action levels
- Debris pile present that is assumed to exceed action levels



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# CAU 573 Field Activities

- Sampling and radiological dose measurements conducted between January 2015 and September 2015, including:
  - Terrestrial radiological surveys (to identify locations of elevated radiological readings and aid in the selection of sample locations)
  - Soil sampling (chemical and radiological)
  - Thermoluminescent dosimeter sampling
  - Geophysical surveys to identify buried contamination (no anomalies identified)
  - Characterization and removal of 13 lead items at Hamilton

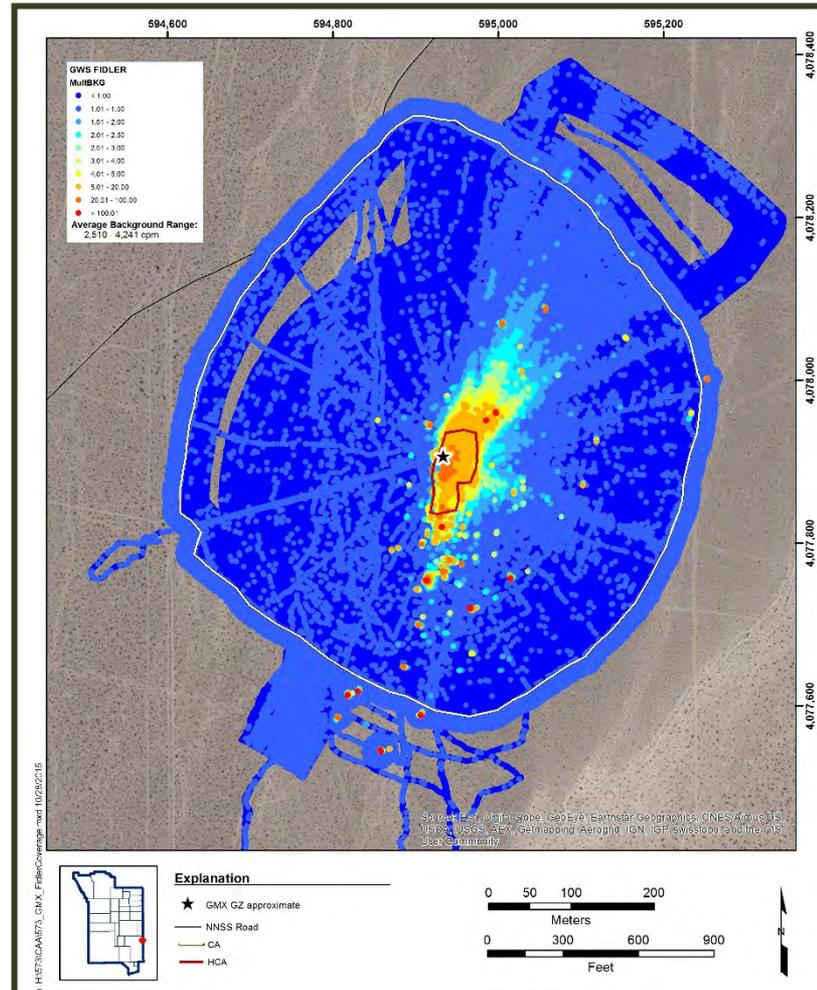


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# CAU 573 GMX Field Results

- Terrestrial radiological surveys:
  - Highest radiological levels located nearest to Ground Zero
  - Other hotspots identified scattered around the area
- Contamination within HCA assumed to exceed action levels
- Soil sample and dosimeter results:
  - Am-241 and Pu-239/240 are the predominant radionuclides with the dose measuring well below action levels
  - HCA requires corrective action because removable contamination is present above corrective action criteria
  - Outside the HCA, no corrective action required as dose is less than action levels



**NOTE: Hot spots identified outside of the contamination area fence are being removed prior to closure**

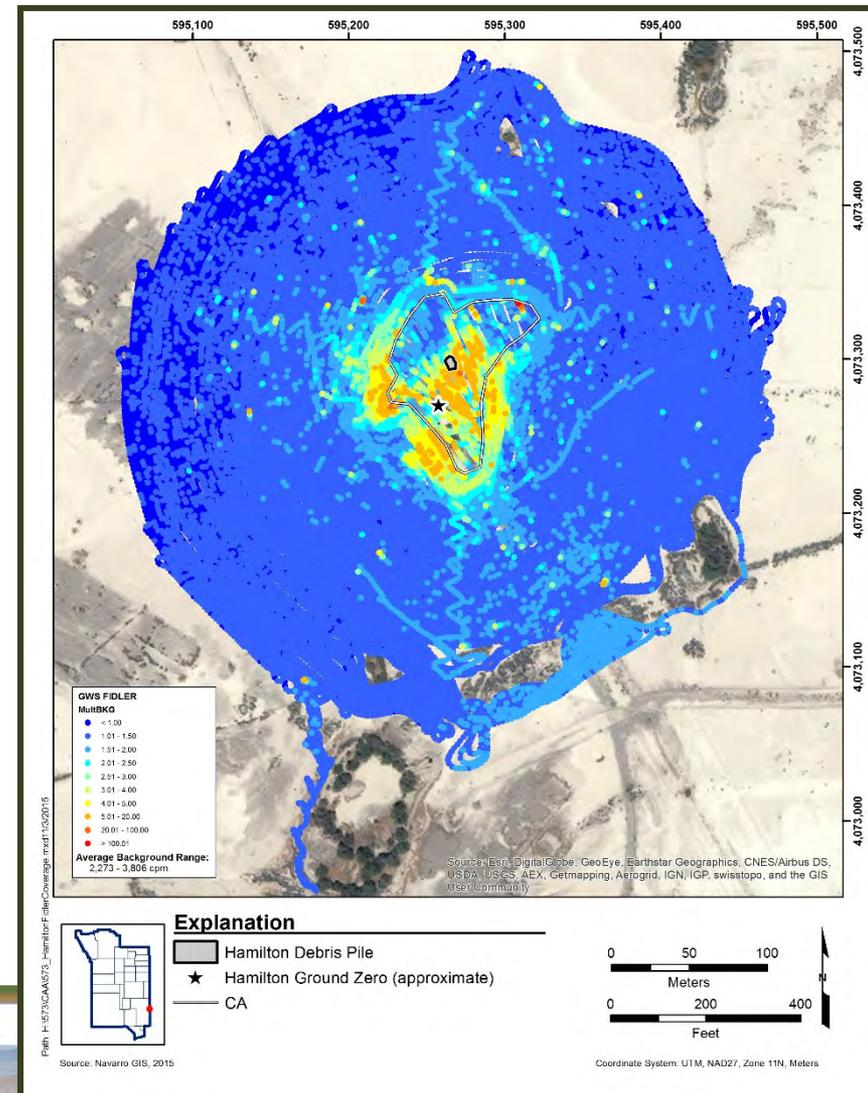


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# CAU 573 Hamilton Field Results

- Terrestrial radiological surveys:
  - Highest radiological levels located nearest to Ground Zero
- Soil sample and dosimeter results:
  - Am-241 and Pu-239/240 are the predominant radionuclides with the dose measuring well below action levels
  - Debris pile requires corrective action as the contamination present likely exceeds action levels



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# NSSAB Involvement



- DOE requests NSSAB provide a recommendation this evening on selection of a Corrective Action Alternative for the sites identified in the following slides
- Possible Corrective Action Alternatives
  - Closure in Place with use restrictions
  - Clean Closure



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# Assumptions

- Site remains in government control
- Site workers have radiological training
- No public access
- If this changes, site closures may be reevaluated



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# Evaluation – GMX (CAS 05-23-02)



# Evaluation - GMX

- Clean Closure:
  - Excavate soil within the HCA to a depth of ~1 foot below ground surface
  - Remove the bunker
  - Dispose of as low-level waste (LLW)
  - Soil/debris volume estimate: ~53,000 cubic feet
- Closure in Place:
  - Establish Federal Facility Agreement and Consent Order (FFACO) Use Restriction for HCA and post as required
  - Area: ~1 acre



# Evaluation – GMX

Corrective Action Alternatives	Pros	Cons
<p>Clean Closure</p> <p>Remove ~ 53,000 cubic feet of soil/ debris</p>	<p>Reduces environmental risk by removing hazard</p> <p>Long-term reliability and effectiveness</p> <p>Eliminates long-term monitoring and maintenance costs</p>	<p>Moderate occupational risk during removal due to heavy equipment and location within High Contamination Area</p> <p>Moderate cost associated with waste packaging and disposal</p>
<p>Closure in Place</p>	<p>Feasible and cost effective</p> <p>Minimal environmental risk</p> <p>Consistent with other similar sites</p>	<p>Controls exposure but does not remove hazard</p> <p>Will require long-term monitoring and maintenance costs</p>



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# Evaluation - Hamilton (CAS 05-45-01)

(height of pile = ~10 feet)



Debris Pile – wood timbers,  
telephone poles, concrete debris



Debris Pile – another view

# Evaluation - Hamilton

- Clean Closure:
  - Remove debris pile, segregate any potential source material
  - Dispose of as LLW
  - Soil/debris volume estimate: ~2,500 cubic feet
- Closure in Place:
  - Establish FFACO Use Restriction for debris pile and post as required
  - Area: ~485 cubic feet



# Evaluation – Hamilton

Corrective Action Alternatives	Pros	Cons
<p>Clean Closure</p> <p>Remove ~ 2,500 cubic feet of soil and debris</p>	<p>Reduces environmental risk by removing hazard</p> <p>Long-term reliability and effectiveness</p> <p>Eliminates long-term monitoring and maintenance costs</p>	<p>Moderate occupational risk during soil and debris removal</p> <p>Moderate cost associated with removal, waste packaging, and disposal</p>
<p>Closure in Place</p>	<p>Feasible and cost effective</p> <p>Minimal environmental risk</p> <p>Consistent with other similar sites</p>	<p>Controls exposure but does not remove hazard</p> <p>Will require long-term monitoring and maintenance costs</p>



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# Summary of Options

Site	Closure Options
GMX (CAS 05-23-02)	Clean Closure
	Closure in Place
Hamilton (CAS 05-45-01)	Clean Closure
	Closure in Place



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# CAU 573 Next Steps

- DOE considers NSSAB recommendations
- Corrective Action Alternatives discussion with State of Nevada Division of Environmental Protection – November 2015
- Complete Draft Corrective Action Decision Document/Corrective Action Plan (CADD/CAP) – December 2015
- Complete Final CADD/CAP - February 2016



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## ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

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Hanford  
Oak Ridge

Idaho  
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Nevada  
Portsmouth

Northern New Mexico  
Savannah River

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Dr. Monica Regalbuto  
Assistant Secretary for Environmental Management  
U.S. Department of Energy, EM-1  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Dr. Regalbuto:

### **Background**

The Department of Energy (DOE) Environmental Management (EM) sites with legacy waste awaiting permanent off-site disposal have been, or could be, subject to large fines from their respective regulatory agencies for failure to meet legally mandated deadlines for permanent disposal of legacy waste. For example, the New Mexico Environment Department recently fined Los Alamos National Laboratory (LANL) and the DOE Waste Isolation Pilot Plant (WIPP) \$54 million for failures connected to a radiation leak when a drum of waste processed at LANL breached a year ago at WIPP, shutting down the nation's nuclear waste repository. LANL has also acknowledged it will miss deadlines set for later this year for long-term waste cleanup at LANL set in a binding consent decree.

Payment of real or potential multi-million dollar fines has the effect to further reduce the ability of these EM Sites to successfully meet mandated and legally binding cleanup goals. In most cases states have the option to use the funds collected on fines for work unrelated to the issues that led to the fine or for the direct benefit of residents of the affected area. A more effective use of funds would be to use the money collected from fines to fund supplementary environmental projects, given that EM funding allocated to DOE and/or the National Nuclear Security Administration for EM work should be used to protect and/or improve the health and environment of the citizens of the geographic area and population affected by the previous disposal of legacy wastes at the DOE sites.

### **Comments and Observations**

In lieu of fines and penalties that could be required and instituted at the respective facilities, the EM Site-Specific Advisory Board (SSAB) recommends that DOE-EM consider Supplemental Environmental Projects (SEPs) as a beneficial and amenable means to help accomplish the legally mandated cleanup goals at DOE facilities.

An SEP is defined as an environmentally beneficial project which a violator voluntarily agrees to undertake in settlement of an enforcement action but which is not legally required by law. In

addition, the U.S. Environmental Protection Agency (EPA), and most state regulatory agencies, allow for the implementation of SEPs in lieu of a portion of civil penalties calculated under the Civil Penalty Policy, when such payment of fines and penalties are imposed;

There are seven common categories of projects that can be acceptable SEPs:

- Public Health
- Pollution Prevention
- Environmental Protection
- Environmental Restoration
- Environmental Assessments and Audits
- Environmental Compliance
- Renewable Energy

### **Recommendation:**

The EM SSAB recommends that DOE-EM;

1. Pursues SEPs in lieu of fines and penalties issued by regulators.
2. Pursues SEPs, in lieu of new fines and penalties imposed by a new compliance order issued by regulators for violations.
3. Proposes SEPs in settlement of enforcement actions by regulators that meet the following restrictions:
  - Are consistent with the EPA SEP policy and Region implementing guidance
  - Are consistent with or advances the Resource Conservation and Recovery Act
  - Have adequate nexus to the violation as determined by the relevant regulators sole discretion, with site stakeholder and public engagement.
  - Involve the management or administration of the project or funds by the relevant regulator; (state and/or EPA) and benefits the community and/or environment near the impacted site by the violation while providing educational opportunities with contractors and public institutions of higher education.
4. Uses SEPs to primarily benefit the community that is directly impacted by the violation.

### **In Summary:**

It is the intent of the EM SSAB to ensure that DOE-EM funds programmed and allocated for the cleanup and mitigation of legacy waste disposal at sites are used for those purposes and for the benefit of the citizens of the affected areas, where the basis of the violations cited by the relevant regulator occurred.

### **References:**

1. EPA Guidelines for Supplemental Environmental Projects
2. State Supplemental Environmental Project Policy Act/Regulations

Steve Hudson, Chair  
Hanford Advisory Board

Herbert Bohrer, Chair  
Idaho National Laboratory  
Site EM Citizens Advisory  
Board

Donna Hruska, Chair  
Nevada SSAB

Doug Sayre, Chair  
Northern New Mexico  
Citizens' Advisory Board

David Hemelright, Chair  
Oak Ridge SSAB

Ben Peterson, Chair  
Paducah Citizens  
Advisory Board

William E. Henderson II, Chair  
Portsmouth SSAB

Harold Simon, Chair  
Savannah River Site  
Citizens Advisory Board



# Nevada Site Specific Advisory Board

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September 16, 2015

## Members

Michael Anderson  
Amina Anderson  
Michael D'Alessio  
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Clark County  
Consolidated Group of Tribes  
and Organizations  
Esmeralda County Commission  
Nye County Commission  
Nye County Nuclear Waste  
Repository Project Office  
State of Nevada Division of  
Environmental Protection  
U.S. National Park Service

## Administration

Barbara Ulmer, Administrator  
*Navarro*  
Kelly Snyder, DDFO  
U.S. Department of Energy,  
Nevada Field Office

Ms. Kelly K. Snyder  
Deputy Designated Federal Officer  
U.S. Department of Energy, Nevada Field Office  
P. O. Box 98518  
Las Vegas, NV 89193-8518

SUBJECT: Recommendation for Communication Improvement Opportunities  
(Work Plan Item #10)

Dear Ms. Snyder,

The Nevada Site Specific Advisory Board (NSSAB) developed a work plan item to provide recommendations, from a community perspective, to the U.S. Department of Energy (DOE) on ways that DOE can improve/enhance communication to the public (i.e. presentations, open houses, documents, fact sheets). Interim suggestions from NSSAB Members were documented in the official minutes of each Full Board meeting.

During fiscal year 2015, the NSSAB made the following recommendations for ways DOE can improve/enhance communication to the public:

- The NSSAB tour was very informative, but the tour guide for future NSSAB tours should have a dynamic presentation and anecdotes and stories that assist attendees in remembering locations/facts regarding the tour of the Nevada National Security Site.
- DOE should consider including information on unrelated topics at its public events, for example, waste management, waste transportation, Office of Secure Transportation information at a Groundwater Open House.
- DOE should advertise NSSAB meetings/events at [vegasinc.com](http://vegasinc.com) and in *The Sunday*.
- DOE should contact editors of media outlets with the NSSAB's meeting dates after the schedule has been approved at the annual September planning meeting. This will provide editors the NSSAB meeting dates in advance to include in the community calendars section.

- DOE speakers should provide definitive answers for items that the NSSAB is asked to make an informed decision rather than providing copious details of possible but improbable scenarios.
- DOE should offer short informational videos at DOE public events and NSSAB meetings.
- DOE should continue to do news releases before each NSSAB meeting to increase community awareness and involvement.
- DOE should consider holding more NSSAB meetings in rural communities who have a more vested interest in the activities at the NNSS.
- DOE should make business cards with NSSAB contact information and fact sheets pertinent to the meeting's agenda available at the meetings as an immediate source to answer public questions.
- DOE should make accommodations for NSSAB members to introduce themselves and the community that they represent at each meeting; so the public can contact them during the breaks or in their communities.
- DOE should replace the display holders at the Mercury cafeteria as the current display holders do not hold the fact sheets upright so people can see them and some of the slots on the bottom tiers are too low to be comfortably viewed.
- DOE should make regular tour opportunities available for the Community Environmental Monitors in the Community Environmental Monitoring Program.
- DOE should make a binder of fact sheets relating to Environmental Management activities available to the public at all NSSAB Full Board meetings.

The Board appreciates the opportunity to provide meaningful input to DOE on ways to enhance/improve communication to the public.

Sincerely,



Donna L. Hruska, Chair

cc: D. A. Borak, DOE/HQ (EM-3.2)  
M. R. Hudson, DOE/HQ (EM-3.2)  
E. B. Schmitt, DOE/HQ (EM-3.2)  
R. F. Boehlecke, NFO  
C. G. Lockwood, NFO  
S. A. Wade, NFO  
B. K. Ulmer, Navarro  
NSSAB Members and Liaisons



Department of Energy  
National Nuclear Security Administration  
Nevada Field Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518



SEP 28 2015

Donna Hruska, Chair  
Nevada Site Specific Advisory Board  
232 Energy Way  
North Las Vegas, NV 89030

RESPONSE TO NEVADA SITE SPECIFIC ADVISORY BOARD (NSSAB)  
RECOMMENDATION FOR COMMUNICATION IMPROVEMENT OPPORTUNITIES  
(WORK PLAN ITEM #10)

The Nevada Field Office (NFO) appreciates the NSSAB's recommendations on ways to enhance/improve communications to the public.

Below are the Board's recommendations and the NFO's responses:

- **NSSAB Recommendation:** The NSSAB tour was very informative, but the tour guide for future NSSAB tours should have a dynamic presentation and anecdotes and stories that assist attendees in remembering locations/facts regarding the tour of the Nevada National Security Site (NNSS).

**NFO Response:** The NFO will consider this recommendation when planning for future NSSAB tours to the NNSS. Additionally, the NFO will inform the NNSS Tour Coordinator that anecdotes and stories enhance the tour experience and guides should be prepared to communicate them during future tours.

- **NSSAB Recommendation:** The Department of Energy (DOE) should consider including information on unrelated topics at its public events, for example, waste management, waste transportation, Office of Secure Transportation information at a Groundwater Open House.

**NFO Response:** This recommendation will be considered during future event planning and execution.

- **NSSAB Recommendation:** DOE should advertise NSSAB meetings/events at [vegasinc.com](http://vegasinc.com) and in *The Sunday*.

**NFO Response:** The NFO has implemented this recommendation.

- **NSSAB Recommendation:** DOE should contact editors of media outlets with the NSSAB's meeting dates after the schedule has been approved at the annual September planning meeting. This will provide editors the NSSAB meeting dates in advance to include in the community calendars section.

**NFO Response:** This recommendation will be implemented.

- **NSSAB Recommendation:** DOE speakers should provide definitive answers for items that the NSSAB is asked to make an informed decision rather than providing copious details of possible but improbable scenarios.

**NFO Response:** The NFO will communicate this recommendation to individuals who interact with the NSSAB and the public.

- **NSSAB Recommendation:** DOE should offer short informational videos at DOE public events and NSSAB meetings.

**NFO Response:** This recommendation will be considered for future events and NSSAB meetings, depending on topics of interest, funding and time constraints.

- **NSSAB Recommendation:** DOE should continue to do news releases before each NSSAB meeting to increase community awareness and involvement.

**NFO Response:** The NFO will continue to do news releases, newspaper advertising, GovDelivery emails (over 3,300 recipients), Facebook, and Twitter before each NSSAB Full Board meeting.

- **NSSAB Recommendation:** DOE should consider holding more NSSAB meetings in rural communities who have a more vested interest in the activities at the NNSS.

**NFO Response:** The NFO will review the annual work plan topics, the member's suggestions for meeting locations, and balance within the travel budget for scheduling future meeting locations.

- **NSSAB Recommendation:** DOE should make business cards with NSSAB contact information and fact sheets pertinent to the meeting's agenda available at the meetings as an immediate source to answer public questions.

**NFO Response:** NSSAB business cards have been made. Additionally, NSSAB contact information, including email, phone, mailing address, website, Facebook, will be included on the cover page of the handouts that are available for the public at each NSSAB Full Board meeting.

- **NSSAB Recommendation:** DOE should make accommodations for NSSAB members to introduce themselves and the community that they represent at each meeting; so the public can contact them during the breaks or in their communities.

**NFO Response:** The facilitator will request that NSSAB members and liaisons introduce themselves and the community or organization that they represent if the public is present at Full Board meetings.

- **NSSAB Recommendation:** DOE should replace the display holders at the Mercury cafeteria as the current display holders do not hold the fact sheets upright so people can see them and some of the slots on the bottom fliers are too low to be comfortably viewed.

**NFO Response:** The NFO will communicate this recommendation to the National Nuclear Security Administration (NNSA) and its contractor NSTec for consideration, as they are the owners of the equipment.

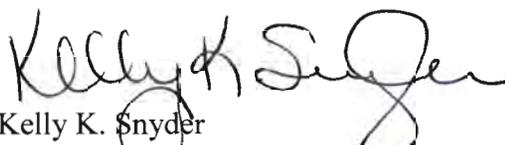
- **NSSAB Recommendation:** DOE should make regular tour opportunities available for the Community Environmental Monitors in the Community Environmental Monitoring Program (CEMP).

**NFO Response:** The NFO will provide this recommendation to the NNSA, as they are responsible for the CEMP. As a point of clarification, tours of the NNSS are offered by the NNSA to the CEMP representatives every two years.

- **NSSAB Recommendation:** DOE should make a binder of fact sheets relating to Environmental Management activities available to the public at all NSSAB Full Board meetings.

**NFO Response:** The NFO will implement this recommendation for future NSSAB Full Board meetings.

The NFO has found these recommendations to be very valuable in communicating with the public and look forward to receiving your feedback on communication enhancements in the upcoming fiscal year.

  
Kelly K. Snyder  
Deputy Designated Federal Officer

EMOS:11515.KKS

cc via e-mail:

D. A. Borak, DOE/HQ (EM-3.2)  
M. R. Hudson, DOE/HQ (EM-3.2)  
E. B. Schmitt, DOE/HQ (EM-3.2)  
B. K. Ulmer, Navarro  
NSSAB Members and Liaisons  
NSTec Correspondence Management  
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C. G. Lockwood, NFO  
S. A. Wade, NFO  
NFO Read File