AGENDA

CAB FULL BOARD MEETING

Frank Rogers Auditorium
755 E. Flamingo Road, Las Vegas, NV

5:00 p.m. – May 12, 2010

1. **Open Meeting / Agenda Review** — **Denise Rupp,** Facilitator
2. **Membership** — **Kelly Snyder,** DDFO
3. **Chair's Opening Remarks:** — **Walt Wegst,** Board Chair
   - Agenda Approval
4. **Current Non-Environmental Management Activity at the Nevada Test Site** — **Darwin Morgan,** NNSA
5. **Public Comment** — **Denise Rupp,** Facilitator
6. **✧✧✧BREAK✧✧✧**
7. **Mixed Waste Storage Unit Update** — **Ken Small,** DOE
8. **Committee Updates:**
   - **Budget** — **Jim Weeks,** Committee Member
     - FY 2012 Budget Prioritization
   - **Membership** — **Kelly Snyder,** DDFO
     - Student Liaison Update
   - **Soils** — **John McGrail**, Committee Chair
   - **Transportation/Waste** — **Robert Johnson,** Committee Chair
   - **UGTA** — **Jim Weeks,** Committee Member
9. **Work Plan Review** — **Walt Wegst,** Board Chair
10. **EM SSAB Update** — **Walt Wegst,** Board Chair
    - 03-18-10 EM SSAB Chairs Conference Call
    - Spring Chairs Meeting, Oak Ridge, TN
11. **DOE Update:** — **Kelly Snyder,** DOE DDFO
    - Environmental Management (EM) Monthly Report (April and May 2010)
    - Groundwater Open House

12. **Other CAB Business:** **Walt Wegst,** Board Chair

- Quorum Issue

- Member Orientation
  Tuesday, May 25, 1-5 p.m.
  Enterprise Library, 25 E. Shelbourne Avenue, LV
  - Dinner site selection

- Nevada Test Site Tour
  Thursday, June 17

- Next Full Board Meeting scheduled
  for 5:00 p.m. July 14, 2010
  Atomic Testing Museum, Las Vegas, NV
  - Presentation: Mixed Low-Level Waste Cell Update

13. **April and May State of Nevada Notifications** **Kelly Snyder,** DOE DDFO

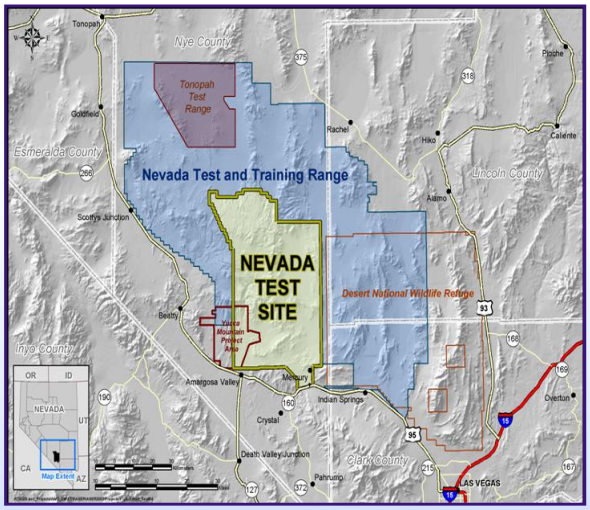
14. **Meeting Wrap-Up** / **Assessment** **Denise Rupp,** Facilitator

DRAFT

Nevada Test Site: Today's Role

National Nuclear Security Administration

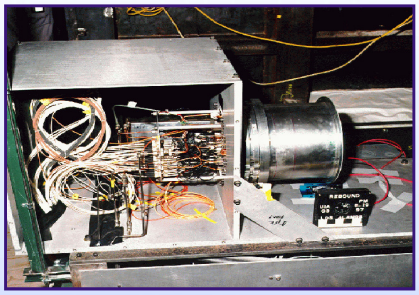
The Nevada Test Site

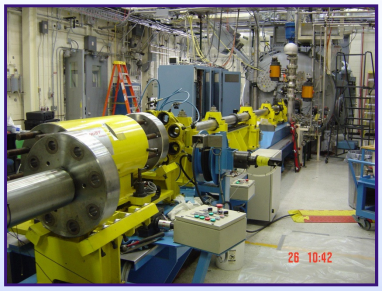


National Nuclear Security Administration

Post-1992 Approach

- Comprehensive Nuclear Test Ban Treaty of 1996 prohibits any nuclear weapons tests
- Establishment of "Stockpile Stewardship Program"
- Weapons material reliability tested through a variety of non-nuclear experiments



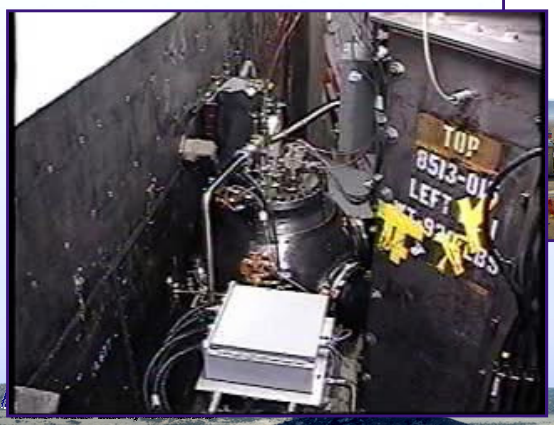


Nevada Site Office…Today and Beyond

- National Security
  - Stockpile Stewardship
  - Homeland Security and Defense Activities

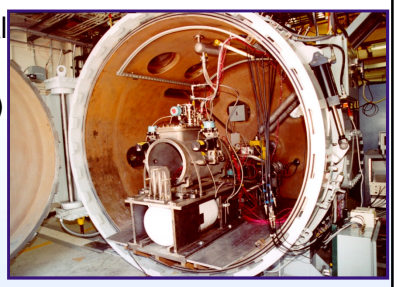
U1a

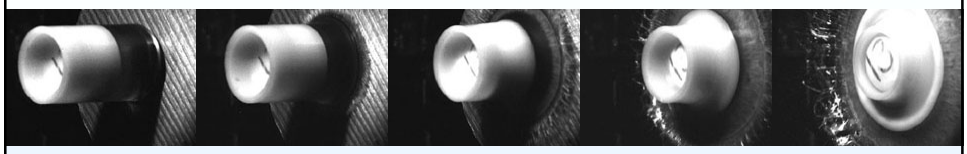
- Underground lab for subcritical experiments
- Data for National Laboratories
- Safety and reliability of stockpile
- 23 experiments to date



Joint Actinide Shock Physics Experimental Research (JASPER)

- Study properties and responses of special nuclear materials under high pressure
- 86 shots to date (34 plutonium [Pu] shots)
  - First shot: JAS001 March 19, 2001
  - First Pu shot: JAS021 July 8, 2003

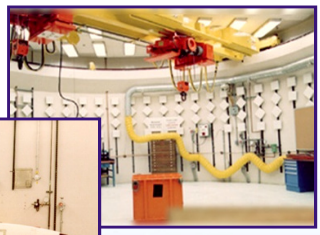


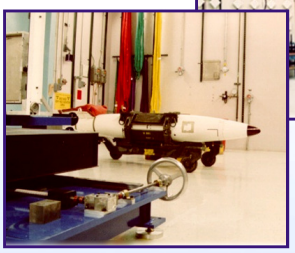


National Nuclear Security Administration

Device Assembly Facility

- 100,000 square-foot facility
- Assembly cells designed to withstand the effects of explosions
- Glovebox for JASPER target assembly
- Current location for Criticality Experiments Facility missions





National Nuclear Security Administration

Big Explosive Experimental Facility

- Non-nuclear high-explosive tests
- Capable of 70,000 pounds of explosives

National Nuclear Security Administration

National Nuclear Security Administration

Nonproliferation Test and Evaluation Complex (NPTEC)

- Unique 67-acre facility equipped to test sensors using a variety of release methods, including chemical releases, wind tunnel releases, and portable release systems
- Provides sensor arrays for ground truth data, an explosives pad, weather data instrumentation, calibrated release systems, and 24-hour release capability
- Environmental Impact Statement allows release of hazardous materials for training, field-testing of detectors, plume dispersion experimentation, and equipment and materials testing

National Nuclear Security Administration

Homeland Security and Defense

- Train responders in prevention/response to terrorist radiological/nuclear material
- Unique Nevada Test Site training complexes and capabilities simulate realistic scenarios in radiation and chemical environment
  - More than 70,000 responders trained since 1999

COUNTER TERRORISM OPERATIONS SUPPORT

U.S. DEPARTMENT OF HOMELAND SECURITY

National Nuclear Security Administration

Homeland Security: Increasing Activity at the Nevada Test Site

- Radiological / Nuclear Countermeasures Test and Evaluation Complex
  - National test bed for radiation detectors/sensors
  - Realistic operational environment allows use of significant quantities of nuclear material
- Advanced Spectroscopic Portal (ASP) monitoring

U.S. Department of Defense Activities:

Advanced Weapons Concepts at the Nevada Test Site

- Defense Threat Reduction Agency tests advanced penetrator weapons
  - Relevant geology
  - Large tunnel complexes as available targets
  - Numerous old bunkers used as targets
- Cooperation/coordination with Nellis Air Force Base
- Other defense missions
  - Special forces training
  - Sensor development and testing

Nevada Test Site Plays Central Role in National Emergency Response

- Remote Sensing Laboratory (RSL) provides technologies, equipment, and national response teams to search for improvised nuclear devices and radiation dispersal devices ("dirty bombs")
  - RSL-Andrews provides the national capital region response
  - RSL-Nellis provides other national response
- Also provides consequence management teams if a device were to detonate

Stewardship of the Nevada Test Site

Mercury

Facilities and Infrastructure

Mission

Provide world-class facilities, a remote and secure location, and the expertise to meet the national security needs of America.

For More Information

For more information on

U.S. Department of Energy,

National Nuclear Security Administration

Nevada Site Office programs and activities:

visit our website at www.nv.energy.gov

or call the

Office of Public Affairs at

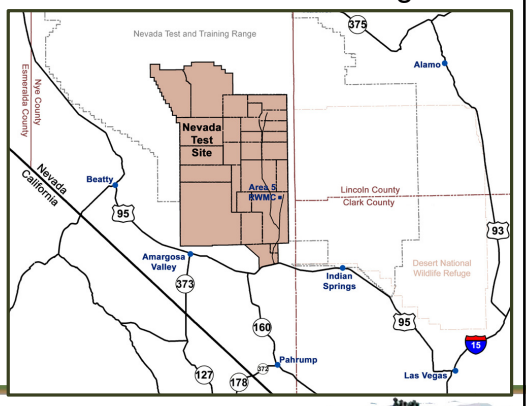
(702) 295-3521

New Mixed Waste Storage Unit (MWSU) Permit

Ken Small
RCRA Program Manager
Briefing to Community Advisory Board (CAB)
May 12, 2010

New Permit Being Pursued

- The U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Site Office is submitting an application to the State of Nevada Division of Environmental Protection (NDEP) for a Resource Conservation Recovery Act (RCRA) Permit to store mixed low-level waste (MLLW) at the Nevada Test Site prior to permanent disposal



What is MLLW?

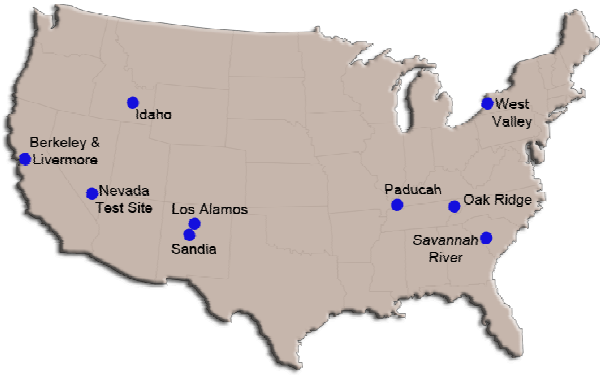
- MLLW is waste that contains both low-level radioactive waste and a hazardous component (toxic, corrosive, reactive, ignitable, or specifically identified by the U.S. Environmental Protection Agency as "hazardous")

Why is a Storage Unit Needed?

- Currently, MLLW is permanently disposed in Pit 3 at the Nevada Test Site Area 5 Radioactive Waste Management Complex (RWMC)
- In accordance with a RCRA permit, Pit 3 must close by November 30, 2010
- Planning and design of a new RCRA-permitted MLLW disposal cell is underway (anticipate opening March 2011)
- Storage of MLLW is needed to "bridge the gap" between closing Pit 3 and opening the new disposal cell to ensure clean up activities at DOE sites continues

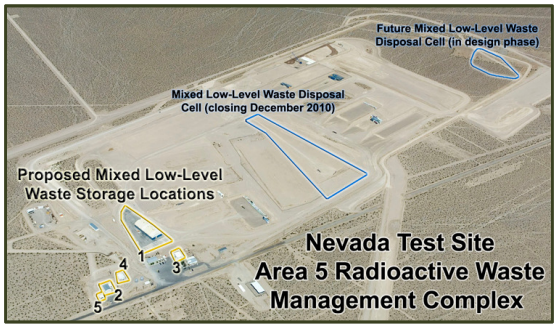
Where will the Waste Come From?

- MLLW is generated by environmental clean up activities at DOE sites, including the Nevada Test Site



Where will the Mixed Waste Storage Unit be Located?

- Waste will be stored in multiple locations at the Nevada Test Site Area 5 RWMC
  - TRU Pad Cover Building and storage pad **(1)**
  - Visual Examination and Repackaging Building **(2)**
  - Real-Time Radiography Building and pad **(3)**
  - Sprung Instant Structure Building **(4)**
  - Drum Holding Pad **(5)**



TRU Pad Cover Building and storage pad

Real-Time Radiography Building and pad

Sprung Instant Structure Building

Visual Examination and Repackaging Building

Drum Holding Pad

Permitting Process Timeline

- Public meeting held to inform community of intent to submit permit application – April 26, 2010
- DOE accepting comments on its intent to submit application – May 7, 2010
- DOE submits permit application to State of Nevada (NDEP) – May 2010
- NDEP reviews permit application and returns comments to DOE – 180 days from receipt
- DOE responds to and resolves NDEP comments - within 30 days of receiving comments

Permitting Process Timeline
(continued)

- NDEP conducts a 45-day public comment period on the draft permit – Fall 2010
- NDEP resolves public comments in conjunction with DOE – Fall 2010
- NDEP notifies DOE regarding permit decision – December 2010

Anticipated Permit Terms and Conditions

- RCRA permit valid for 5 years
- NDEP determines the storage volume limit
- Waste stored in boxes and/or drums in accordance with U.S. Department of Transportation requirements and Nevada Test Site Waste Acceptance Criteria
- NDEP conducts annual inspections
- NDEP has authority to revoke permit

CAB Involvement

- DOE encourages the CAB to provide a recommendation regarding their position on this activity during NDEP's 45-day public comment period (anticipated timeframe - Fall 2010)

Community Advisory Board for Nevada Test Site Programs

Members
Kathleen Bienenstein
Patricia Fleming
David Freeman
Robert Gatliff
David Hermann
Donna Hruska
Robert Johnson
Michael Long
John M. McGrail, P.E.
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Harold Sullivan*, Vice-Chair*
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Liaisons
Nye County
Clark County
State of Nevada Division of Environmental Protection
U.S. Department of Energy, Nevada Site Office
U.S. National Park Service

Administration
Denise Rupp, Administrator
Navarro Research & Engineering, Inc.
Kelly Snyder, DDFO
U.S. Department of Energy, Nevada Site Office

May 12, 2010

Mr. Scott Wade
Assistant Manager for Environmental Management
U.S. Department of Energy, Nevada Site Office
P. O. Box 98510
Las Vegas, NV 89193-8518

SUBJECT: Community Advisory Board for Nevada Test Site Programs (CAB) Recommendations for Fiscal Year (FY) 2012 Budget Prioritizations

Dear Mr. Wade:

The CAB Budget Committee has completed its annual review and prioritization of the U.S. Department of Energy Nevada Site Office (DOE NSO) Environmental Management (EM) projects for the FY 2012 budget submittal. The committee presented its recommendations to the Full Board at its May 12, 2010 meeting, where they were approved.

Last year the Board reviewed and prioritized four EM technical sub-projects. The Board continues to place the highest priority on the Underground Test Area sub-project. This ranking reflects our commitment to working with EM to ensure budget dollars are available for continued drilling and monitoring efforts in support of groundwater issues at the Nevada Test Site.

Following is the CAB's recommended FY 2012 budget ranking with the reasons for its ranking. A variety of factors were considered including: health and safety risks, regulatory requirements and completion schedules. We also considered any significant changes in sub-project areas from last year and applied that information to arrive at our current recommendations.

1. Underground Test Area (UGTA)
   - Continued drilling to calibrate and validate flow models
   - Refine existing models utilizing ongoing data
   - Highest potential impact on the pubic, particularly offset rural communities

232 Energy Way, M/S 505, North Las Vegas, NV 89030 ◇ Phone 702-657-9088 ◇ Fax: 702-295-5300
E-mail: NTSCAB@nv.doe.gov ◇ Website Home Page: http://www.nv.energy.gov/ntscab

2. Low-Level and Mixed Low-Level Waste
   - Provides a vital resource for the entire DOE Complex
   - Costs to re-start operations after temporary closure would exceed normal operating costs
   - Important to close the original 92 acres

3. Soils
   - Continue momentum of FY 2009, 2010 and 2011 progress
   - Funds are necessary to work toward agreement with the Air Force
   - Additional funds would allow for accelerated clean up

4. Industrial Sites
   - Current plan and approach does not require additional funds
   - Approaching completion of remaining Corrective Action Units
   - Allows for additional time to identify an alternate use for the EMAD facility as opposed to demolition (see December 17, 2009 CAB recommendation)

Thank you for the opportunity to participate in the annual budget prioritization and for the assistance provided by the EM staff. Each federal project and sub-project director took the time to meet with the CAB Budget Committee and provided detailed information. We sincerely appreciate this support and look forward to your response regarding this year's budget submittal.

Sincerely,

Walter F. Wegst, Chair
Community Advisory Board
for Nevada Test Site Programs

cc: C. Lockwood, PSG, NNSA/NSO, Las Vegas, NV
D. Rupp, NREI, Las Vegas, NV
M. Nielson, DOE/HQ (EM-13) FORS
C. Brennan, DOE/HQ (EM-13) FORS
A. Clark, DOE/HQ (EM-13) FORS
CAB Members and Liaisons
NNSA/ NSO Read File

FY 2010 Work Plan

changes reflected in blue

(numbers reflect priority)	Task	Committee Assignment	Completion Date	Status
1	Corrective Action Unit (CAU) 114 Engine Maintenance, Assembly, and Disassembly Facility (EMAD) – evaluate possible clean up scenarios DOE is considering and make recommendation regarding path forward for remediation site	Industrial Sites	Dec-09	recommendation submitted 12/17/09
2	2 Locomotive and 4 Train Cars used in DOE activities at the Nevada Test Site – review possible use/disposal	Industrial Sites	Mar-10 July-10	*meeting date TBD*
3	New Mixed Low-Level Waste Disposal Cell – provide recommendation during State of Nevada public comment period regarding CAB's stance on Resource Conservation Recovery Act (RCRA) Permit for construction and utilization of new MLLW disposal cell	Transportation/ Waste	Dec-09	recommendation submitted 12/8/09
4	FY 2012 Budget – provide recommendation regarding the CAB's FY 2012 sub-project funding prioritization	Budget	Mar-10	*vote at 5/12 meeting*
5	UGTA Approach for Lower Risk CAUs – year-long education opportunity in anticipation of future FY recommendation exploring possibility of moving from modeling to monitoring approach	UGTA	n/a Sept-10	*June 15 meeting scheduled*
6	Pahute Mesa Drilling Campaign Wells – evaluate DOE's potential uses for offsite UGTA wells and provide recommendation regarding path forward	UGTA	Mar-10	removed from plan 2/9/10 - recommendation needed FY 2012 - ongoing updates FY2010/11
7	Membership Recruitment – recruit, interview and recommend potential Board members	Membership	Jan-10	recommendation submitted 12/17/09
8	Waste Volumes and Transportation - research and analyze waste volume moving along waste transportation routes as well as alternative reporting of shipments and make recommendations	Transportation/ Waste	TBD	*requesting removal from Work Plan 5-12-10*
9	Groundwater Models – review and make recommendations regarding DOE's updated groundwater model flow paths	UGTA	Mar-10	removed from plan 2/9/10 - recommendation needed FY 2012 - ongoing updates FY2010/11

(numbers reflect priority)	**Task**	**Committee Assignment**	**Completion Date**	**Status**
10	CAU 372, Area 20 Cabriolet/Palanquin Unit Craters – evaluate possible closure scenarios DOE is considering and make recommendation regarding path forward for closing the site	Soils	Jan-10 July-10	*awaiting completion of field investigation by DOE*
11	Groundwater Wells Completion Reports – review and make recommendations on completion reports for ER-20-7, ER-20-8, ER-20-8#2, and all FY 2010 wells	UGTA	TBD Sept-10	*awaiting completion reports*
12	Operation Clean Desert Enhancement – explore and make recommendations on possible science activities to enhance EM Outreach's Operation Clean Desert program	Outreach	TBD	removed from plan 3/2/10
13	CAB Outreach Display – Develop a CAB outreach display to increase CAB awareness	Outreach	May-10	completed 05-10
14	CAU 371, Johnnie Boy Crater and Pin Stripe – evaluate possible closure scenarios DOE is considering and make recommendation regarding path forward for closing the site	Soils	Dec-09	recommendation submitted 12/17/09
15	Explore possibility of CAB-sponsored science Fair in conjunction with Beatty schools in 2009/2010 school year	Outreach	May-10	removed from plan 3/2/10 - not within CAB purview
16	DOE Public Education – make recommendations to DOE regarding ongoing public education of test site activities/history	Outreach	ongoing	removed from plan 3/2/10
17	Low-Level Waste Sub-Project Funding Cut – provide recommendation regarding ~$17 million cut in funding since FY 2009	Budget	Mar-10	removed from plan 3/3/10
18	DOE Land Withdrawal – review and make recommendation regarding DOE's withdrawal in response to land-use issues raised by the State of Nevada Attorney General	Transportation/ Waste	TBD	removed from plan 11/19/09 - land transfer completed
19	Student Liaison CAB positions (2)	Membership	Sep-10	*awaiting response from Pahrump Valley High School*

Environmental Management's Monthly Report to the CAB
April 2010

Low-Level Waste (LLW)

Activities (March)

- As of March 21, 2010, the cumulative LLW volume received for FY 2010 is 643,517 ft^3 in 1,132 shipments. The cumulative mixed low-level waste (MLLW) volume received for FY 2010 is 29,290 ft^3 in 42 shipments. LLW Operations has worked 30,246 hours since its last lost-time accident (September 23, 2009).
- The LLW Sub-Project conducted three (3) Radioactive Waste Acceptance Program (RWAP) Impromptu Surveillances at Nuclear Fuel Services (TN), Lawrence Livermore National Laboratory (CA), and Wastren Advantage, Inc. at the Transuranic Waste Processing Center (TN). Three (3) waste verification visits were conducted at Idaho National Laboratory, Perma-Fix (TN), and Duratek/Energy*Solutions* (TN).
- The Sub-Project finalized its quarterly LLW Forecast Update which indicated that generators are planning to ship approximately 2,238,000 cubic feet of LLW and MLLW to the NTS in FY 2010.
- The new RCRA mixed low-level waste disposal cell design/build subcontract was awarded. Conditional approval of the RCRA Part B Permit Application was received from NDEP to allow for design to commence. Once design is complete, NDEP will review and provide final permit approval allowing construction to commence.

Planned Activities (April)

- The LLW Sub-Project expects to receive approximately 244,000 ft^3 of LLW and MLLW for disposal during the month.
- The LLW Sub-Project plans to conduct one (1) RWAP new generator audit at EnergX at the Argonne National Laboratory (IL) and one (1) RWAP Impromptu Surveillance at the Savannah River Site (SC).

Underground Test Area (UGTA)

Activities (March)

Frenchman Flat

- Continued developing monitoring network plan for input into the Corrective Action Decision Document/Corrective Action Plan (CADD/CAP).

Pahute Mesa

- The drilling report for Well ER-20-7 was completed and submitted to NSO.
- Completed construction of the access road, drill pad and sumps at the ER-EC-12 site. Completed repairs to the ER-20-4 drill pad and sumps.
- Began construction of the conductor hole at the ER-EC-12 site.
- Completed the Well Completion Report for Wells ER-20-8/ER-20-8#2, and continued work on the Well Completion Report for Well ER-EC-11.
- Continued hydrogeology analysis and evaluation.

Yucca Flat

- Continued Transport Model and Analysis.

Rainier Mesa/Shoshone Mountain

- Continued Transport Model and Analysis.

Planned Activities (April)

Frenchman Flat

- The Peer Review will begin on April 6 and will continue until September.
- Continue preparation of the Monitoring Network Plan.
- Complete the monitoring network white paper for distribution to the peer reviewers.

Pahute Mesa

- Complete preparation of the well completion reports for well ER-EC-11.
- Complete preparation of the well development and testing plan for Phase II wells (ER-20-7, ER-20-8, ER-20-8#2, ER-20-4, ER-20-9, ER-EC-11, ER-EC-11#2, ER-EC-12, ER-EC-13, ER-EC-14, ER-EC-15).
- Complete construction of conductor hole, rat & mouse holes and anchor holes at the ER-EC-12 site.
- Complete construction of the rat & mouse holes and anchor holes at the ER-20-4 site.
- Begin well development and testing of the ER-EC-11 well.
- Begin construction of the access road drill pad and sumps at the ER-EC-13 site.
- Continue hydrogeology analysis and evaluation.

Yucca Flat

- Continue transport model analysis and evaluation.

Rainier Mesa/Shoshone Mountain

- Continue transport model analysis and evaluation.

<u>Industrial Sites:</u>

<u>Activities (March)</u>

- Corrective Action Unit (CAU) 113, Area 25 Reactor Maintenance, Assembly, and Disassembly (R-MAD) Facility
  - Continued demolition activities, including explosive demolition of the high bay, and began shipping low-level waste to Area 5 (American Recovery and Reinvestment Act funded)
- CAU 114, Area 25 Engine Maintenance, Assembly, and Disassembly (EMAD) Facility
  - Continued site setup and began field remediation activities
  - Initiated pre-field planning activities for Rail Road Track investigation
- CAU 117, Area 26 Pluto Disassembly Facility
  - Completed characterization of the facility for asbestos and began planning activities for abatement (American Recovery and Reinvestment Act funded)
- CAU 408, Bomblet Target Area (Tonopah Test Range [TTR])
  - Continued field remediation activities (American Recovery and Reinvestment Act funded)
  - Submitted Final Streamlined Approach for Environmental Remediation (SAFER) Plan Rev. 1 to State of Nevada Division of Environmental Protection (NDEP) (American Recovery and Reinvestment Act funded)
- CAU 544, Cellars, Mud Pits, and Oil Spills
  - Conducted pre-Data Quality Objectives (DQO) meetings
- CAU 560, Septic Systems
  - Completed field remediation activities
- CAU 562, Waste Systems
  - Conducted additional Decision II sampling
- CAU 563, Septic Systems
  - Received approval from NDEP for Final Closure Report (CR)

<u>Planned Activities (April)</u>

- CAU 113, Area 25 R-MAD Facility
    - Continue demolition activities and disposal of low-level waste (American Recovery and Reinvestment Act funded)
- CAU 114, Area 25 EMAD Facility
    - Continue field remediation activities
    - Continue pre-field planning activities for the Rail Road Track investigation
- CAU 117, Area 26 Pluto Disassembly Facility
    - Begin asbestos abatement activities (American Recovery and Reinvestment Act funded)
- CAU 408, Bomblet Target Area (TTR)
    - Continue field remediation activities (American Recovery and Reinvestment Act funded)
    - Receive approval from NDEP for Final SAFER Plan Rev. 1 (American Recovery and Reinvestment Act funded)
- CAU 560, Septic Systems
    - Submit Final Corrective Action Decision Document/Closure Report (CADD/CR) to NDEP

Soils:

Activities (March)

- Corrective Action Unit (CAU) 367, Area 10 Sedan, Ess and Uncle Unit Craters
    - Began field investigation activities (American Recovery and Reinvestment Act funded)
- CAU 372, Area 20 Cabriolet/Palanquin Unit Craters
    - Continued field investigation activities
- CAU 375, Area 30 Buggy Unit Craters
    - Submitted Final Corrective Action Investigation Plan (CAIP) to State of Nevada Division of Environmental Protection (NDEP) (American Recovery and Reinvestment Act funded)

Planned Activities (April)

- CAU 106, Areas 5, 11 Frenchman Flat Atmospheric Sites
    - Submit Final CAIP to NDEP (American Recovery and Reinvestment Act funded)
- CAU 374, Area 20 Schooner Unit Crater
    - Begin field investigation activities (American Recovery and Reinvestment Act funded)
- CAU 367, Area 10 Sedan, Ess and Uncle Unit Craters
    - Continue field investigation activities (American Recovery and Reinvestment Act funded)
- CAU 372, Area 20 Cabriolet/Palanquin Unit Craters
    - Continue field investigation activities
- CAU 375, Area 30 Buggy Unit Craters
    - Receive approval from NDEP for Final CAIP (American Recovery and Reinvestment Act funded)

Public Involvement

Activities (March)

- Nevada Site Office staff participated in Community Advisory Board for Nevada Test Site Programs meetings.
- Thirty (30) copies of the *Operation Clean Desert* activity book and computer game, and copies of the display panels were provided to a 5th grade teacher at Aldeane Ries Elementary School on March 4, 2010. This teacher attended the *Nevada Test Site Activities and Operation Clean*

Desert session during the February 2010 Clark County School District Winter New Teacher Conference.

- Waste management and environmental restoration posters and videos were exhibited at the Nevada Site Office Environmental Management booth during the Waste Management 2010 Symposia in Phoenix, AZ, March 7-10, 2010.
- One (1) copy of the *Operation Clean Desert* activity book and computer were mailed to a special education teacher in Sterling, VA, as requested via envmgt@nv.doe.gov.
- An *Operation Clean Desert* display was setup in the Public Reading Room. This is the first of several Environmental Management posters to be rotated through the Public Reading Room every three (3) months.

Planned Activities (April)

- Representatives of the Nevada Site Office Environmental Management program will exhibit an *Operation Clean Desert* display during the Shark Reef Party for the Planet at Mandalay Bay on Saturday, April 17, 2010. Copies of the *Operation Clean Desert* activity book and computer game will be available to participants, as well as brochures on outreach materials/activities and pencils made from reclaimed currency.
- Representatives of the Nevada Site Office will present the pollution prevention display and conduct an activity with 8-10 year olds participating in Take Your Daughters and Sons to Work Day on Thursday, April 22, 2010. *Reduce, Reuse, Recycle* activity books and bookmarks, and pencils made from reclaimed currency will be distributed during the event.
- Nevada Site Office staff will participate in Community Advisory Board for Nevada Test Site Programs meetings.

Environmental Management's Monthly Report to the CAB
May 2010

Low-Level Waste (LLW)

Activities (April)

- As of April 26, 2010, the cumulative LLW volume received for FY 2010 is 1,034,974 ft^3 in 1,623 shipments. The cumulative mixed low-level waste (MLLW) volume received for FY 2010 is 40,691 ft^3 in 52 shipments. LLW Operations has worked 39,687 hours since its last lost-time accident (September 23, 2009).
- The LLW Sub-Project conducted one (1) Radioactive Waste Acceptance Program (RWAP) Assist Visit at the Savannah River Site in South Carolina, and one (1) RWAP Audit at Argonne National Laboratory (ANL) in Illinois. The Audit of ANL resulted in four (4) observations, which ANL resolved before the Audit Team left the site.
- The Sub-Project is in the process of completing its quarterly LLW Forecast Update. Currently, generators are planning to ship approximately 2,370,000 cubic feet of LLW and MLLW to the NTS in FY 2010. The NSO will finalize the forecast update in May.
- The NSO completed the 60% review of the replacement RCRA mixed low-level waste disposal unit. Conditional approval of the RCRA Part B Permit Application was received from NDEP to allow for design to commence. Once design is complete, NDEP will review and provide final permit approval allowing construction to commence.

Planned Activities (May)

- The LLW Sub-Project expects to receive approximately 249,000 ft^3 of LLW and MLLW for disposal this month.
- The LLW Sub-Project plans to conduct one (1) RWAP Assist Visit of the West Valley Generator, one (1) RWAP Impromptu Surveillance.
- The Nevada Site Office will submit an application to the State of Nevada for a Mixed Waste Storage Unit permit for the Area 4 Radioactive Waste Management Complex.

Underground Test Area (UGTA)

Activities (April)

- **Frenchman Flat**
  - The Phase II Documentation Overview of Corrective Action Unit 98: Frenchman Flat, Rev. 1 was submitted to NSO on April 13, 2010.
  - The external Peer Review process began a kick-long kick-off session April 6-9, 2010.
- **Pahute Mesa**
  - The drilling report for Well ER-20-8#2 was completed and submitted to NSO for review.
  - The drilling report for Well ER-EC-11 was completed and submitted to NSO for review.
  - Well development and testing commenced at Well ER-EC-11.
  - Completed the Well Completion Report for Wells ER-20-8/ER-20-8#2, and continued work on the Well Completion Report for Well ER-EC-11.
  - Continued support of hydrogeology analysis and evaluation.
  - Completed construction of the conductor hole at the ER-EC-11 site.
  - Completed installation of rat & mouse holes and anchor holes at the ER-20-4 site.
  - Issued the Storm Water Pollution Prevention Plan for access road, drill pad and sump construction at the ER-EC-13 site. Began survey support for the road, pad and sump construction.

- **Yucca Flat**
    - Continued Transport Model Analysis and Evaluation.
- **Rainier Mesa/Shoshone Mountain**
    - A status briefing for the flow and transport analysis and evaluation task was provided to State of Nevada.

Planned Activities (May)

- **Frenchman Flat**
    - Continue preparation of the Monitoring Network Plan. The Monitoring Network Plan describes the monitoring wells that will be installed to evaluate the model, monitor the contaminant migration, and verify compliance with the regulations, i.e., is the compliance strategy working. This network will become part of the long-term monitoring after closure of the Corrective Action Unit.
    - Complete the monitoring network white paper for distribution to the peer review panel.
    - Continue peer review of the flow and transport model.
- **Pahute Mesa**
    - Complete well development and testing of Well ER-EC-11 and initiate Well ER-20-7.
    - Complete the Head Monitoring Report and submit to NSO.
    - Complete Phase II Well Development and Testing Plan and submit to NSO.
    - Complete the Well Completion Report for Well ER-EC-11.
    - Continue support of hydrogeology analysis and evaluation.
    - Complete support to well development, testing and sampling of the ER-EC-11 well.
    - Continue access road, drill pad and sump construction at the ER-EC-13 site.
    - Prepare sumps at the ER-20-7 site for installation of new liners.
- **Yucca Flat**
    - Continue transport model analysis and evaluation.
- **Rainier Mesa/Shoshone Mountain**
    - Continue transport model analysis and evaluation.

Industrial Sites:

Activities (April)

- Corrective Action Unit (CAU) 113, Area 25 Reactor Maintenance, Assembly, and Disassembly (R-MAD) Facility
    - Continued demolition activities and disposal of low-level waste (funded by the American Recovery and Reinvestment Act)
- CAU 114, Area 25 Engine Maintenance, Assembly, and Disassembly (EMAD) Facility
    - Continued field remediation activities
    - Continued pre-field planning activities for the Railroad (RR) Track investigation (funded by the American Recovery and Reinvestment Act)
- CAU 117, Area 26 Pluto Disassembly Facility
    - Began asbestos abatement preparation activities and resumed preparation of the building for demolition (funded by the American Recovery and Reinvestment Act)

- CAU 408, Bomblet Target Area (Tonopah Test Range [TTR])
    - Received approval from State of Nevada Department of Environmental Protection (NDEP) for Final Streamlined Approach for Environmental Restoration (SAFER) Plan Rev. 1 (funded by the American Recovery and Reinvestment Act)
    - Continued field remediation activities (funded by the American Recovery and Reinvestment Act)
- CAU 544, Cellars, Mud Pits, and Oil Spills
    - Completed the final Data Quality Objectives (DQO) meeting
- CAU 560, Septic Systems
    - Submitted Final Corrective Action Decision Document/Closure Report (CADD/CR) to NDEP
    - Received approval from NDEP for Final CADD/CR

Planned Activities (May)

- CAU 110, Area 3 Waste Management Disposal U-3ax/bl Crater
    - Perform vegetation survey
- CAU 113, Area 25 R-MAD Facility
    - Continue segregation and size reduction of demolition debris and disposal of low-level waste (funded by the American Recovery and Reinvestment Act)
- CAU 114, Area 25 EMAD Facility
    - Continue field remediation activities
    - Continue pre-field planning activities for the RR track investigation (funded by the American Recovery and Reinvestment Act)
- CAU 117, Area 26 Pluto Disassembly Facility
    - Begin asbestos abatement and continue preparation of the building for demolition (funded by the American Recovery and Reinvestment Act)
- CAUs 400, 407, 424, 426, 453, 484, and 487 (TTR)
    - Conduct post-closure inspections
- CAU 408, Bomblet Target Area (TTR)
    - Continue field remediation activities (funded by the American Recovery and Reinvestment Act)
- CAU 544, Cellars, Mud Pits, and Oil Spills
    - Submit Draft SAFER Plan to NDEP

Soils:

Activities (April)

- Corrective Action Unit (CAU) 106, Areas 5, 11 Frenchman Flat Atmospheric Sites
    - Submitted Final Corrective Action Investigation Plan (CAIP) to State of Nevada Division of Environmental Protection (NDEP) (funded by the American Recovery and Reinvestment Act)
- CAU 367, Area 10 Sedan, Ess and Uncle Unit Craters
    - Continued field investigation activities (funded by the American Recovery and Reinvestment Act)
- CAU 372, Area 20 Cabriolet/Palanquin Unit Craters
    - Continued field investigation activities
- CAU 375, Area 30 Buggy Unit Craters
    - Received approval from NDEP for Final CAIP (funded by the American Recovery and Reinvestment Act)

Planned Activities (May)

- CAU 106, Areas 5, 11 Frenchman Flat Atmospheric Sites
    - Receive approval from NDEP for Final CAIP (funded by the American Recovery and Reinvestment Act)
- CAU 367, Area 10 Sedan, Ess and Uncle Unit Craters
    - Perform field investigation activities (funded by the American Recovery and Reinvestment Act)
- CAU 372, Area 20 Cabriolet/Palanquin Unit Craters
    - Perform field investigation activities
- CAU 374, Area 20 Schooner Unit Crater
    - Began field investigation activities (funded by the American Recovery and Reinvestment Act)

Public Involvement

Activities (April)

- Eighty-six (86) copies of the *Operation Clean Desert* activity book and computer game, and three (3) teacher packets (science-based lesson plan, social studies objectives, worksheet, activity book and computer game) were distributed at the *Operation Clean Desert* display during the Shark Reef Party for the Planet at Mandalay Bay on Saturday, April 17, 2010.
- The pollution prevention display was exhibited and an activity conducted with 8-10 year olds participating in Take Your Daughters and Sons to Work Day on Thursday, April 22, 2010. *Reduce, Reuse, Recycle* activity books and bookmarks, and pencils made from reclaimed currency were distributed during the event.
- Thirty (30) *Operation Clean Desert* teacher packets (science-based lesson plan, social studies objectives, worksheet, activity book and computer game) were provided to the Paradise Professional Development School through UNLV.
- In conjunction, with the *Operation Clean Desert* display setup in the Public Reading Room, 125 *Operation Clean Desert* activity books were provided for general public distribution.
- Nevada Site Office contractors participated in a career day event at a local elementary school. The interactive demonstration conducted with the first and second grade students involved basic radiation education and detection. Five (5) *Operation Clean Desert* teacher packets and 95 activity books and computer games were distributed at the event.
- Supported Community Advisory Board activities.

Planned Activities (May)

- Representatives of the Nevada Site Office Environmental Management program will exhibit the *Operation Clean Desert* kids display, the Waste Management Timeline poster, and the Groundwater poster at Rosemary Clarke Middle School in Pahrump on May 19 and 20, 2010. It is anticipated that 400 6th grade students will participate during the annual two-day event which follows the science-based lesson plan and incorporates a presentation by a Nevada Site Office environmental protection specialist.
- Representatives of the Nevada Site Office Environmental Management program will present a *Nevada Test Site and Operation Clean Desert* briefing to environmental science students at Clark High School in Las Vegas the week of May 17, 2010.
- Support Community Advisory Board activities.

Public Notification of Corrective Actions
April 6, 2010
Las Vegas, Nevada

The Department of Energy (DOE) will not be submitting any Corrective Action Unit (CAU) final Corrective Action Decision Documents (CADDs), CADD/Corrective Action Plans (CAPs), CADD/Closure Reports (CRs), or Streamlined Approach for Environmental Restoration (SAFER) Work Plans, proposing closure-in-place to the Nevada Division of Environmental Protection (NDEP), during the next 60 days.

Southern Nevada Public Reading Facility
c/o Nuclear Testing Archive
775 East Flamingo Road
Las Vegas, NV 89119

Northern Nevada Public Reading Facility
Nevada State Library and Archives
100 N. Stewart Street
Carson City, NV 89701-4285

The following is a list of all documents submitted to the Public Reading Facilities during March 2010. Attached is the Executive Summary from the document listed below.

CAU Number	CAU Description	Document
374	Area 20 Schooner Unit Crater	Corrective Action Investigation Plan (CAIP)

Executive Summary for CAU 374 CAIP

Corrective Action Unit 374 is located in Areas 18 and 20 of the Nevada Test Site, which is approximately 65 miles northwest of Las Vegas, Nevada. Corrective Action Unit 374 comprises the five corrective action sites (CASs) listed below:

- 18-22-05, Drum
- 18-22-06, Drums (20)
- 18-22-08, Drum
- 18-23-01, Danny Boy Contamination Area
- 20-45-03, U-20u Crater (Schooner)

These sites are being investigated because existing information on the nature and extent of potential contamination is insufficient to evaluate and recommend corrective action alternatives (CAAs). Additional information will be obtained by conducting a corrective action investigation before evaluating CAAs and selecting the appropriate corrective action for each CAS. The results of the field investigation will support a defensible evaluation of viable CAAs that will be presented in the Corrective Action Decision Document.

The sites will be investigated based on the data quality objectives (DQOs) developed on October 20, 2009, by representatives of the Nevada Division of Environmental Protection and the U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Site Office. The DQO process was used to identify and define the type, amount, and quality of data needed to develop and evaluate appropriate corrective actions for CAU 374.

The releases for CASs 18-23-01 and 20-45-03 were the radiological contamination released and distributed from the nuclear tests conducted at the Danny Boy site and the Schooner site. Corrective Action Sites 18-22-05, 18-22-06, and 18-22-08 are potential releases associated with drums identified in and around the Danny Boy crater.

The presence and nature of contamination at CAU 374 will be evaluated based on information collected from a field investigation. Surface-deposited radiological contamination will be evaluated for the test releases based on a comparison of the total effective dose at sample plot locations to the dose-based final action level. The total effective dose will be calculated as the total of separate estimates of internal and external dose. Results from the analysis of soil samples collected from sample plots will be used to calculate internal radiological dose. Thermoluminescent dosimeters placed at the center of each sample plot will be used to measure external radiological dose.

The presence and nature of contamination from non-test releases (i.e., the drums associated with CASs 18-22-05, 18-22-06, and 18-22-08, as well as any potential releases discovered during the investigation) will be evaluated using soil samples collected from the locations most likely containing contamination, if present.

Appendix A provides a detailed discussion of the DQO methodology and the DQOs specific to each CAS.

The scope of the corrective action investigation for CAU 374 includes the following activities:

- Move surface debris and/or materials, as needed, to facilitate sampling.
- Conduct radiological surveys.
- Collect and submit environmental samples for laboratory analysis to determine whether contaminants of concern are present.
- If contaminants of concern are present, collect additional step-out samples to define the extent of the contamination.
- Collect samples of investigation-derived waste, as needed, for waste management purposes.

This Corrective Action Investigation Plan has been developed in accordance with the *Federal Facility Agreement and Consent Order* that was agreed to by the State of Nevada; DOE, Environmental Management; U.S. Department of Defense; and DOE, Legacy Management. Under the *Federal Facility Agreement and Consent Order*, this Corrective Action Investigation Plan will be submitted to the Nevada Division of Environmental Protection for approval. Fieldwork will be conducted following approval of the plan.

Public Notification of Corrective Actions
May 5, 2010
Las Vegas, Nevada

The Department of Energy (DOE) will be submitting the following Corrective Action Unit (CAU) final Corrective Action Decision Document (CADD), CADD/Corrective Action Plan (CAP), CADD/Closure Report (CR), or Streamlined Approach for Environmental Restoration (SAFER) Work Plan, proposing closure-in-place to the Nevada Division of Environmental Protection (NDEP), during the next 60 days. This document will recommend a closure-in-place strategy in which engineering and/or administrative controls will be used to close the sites although contamination remains.

When submitting this document to NDEP, copies will be supplied to the Las Vegas and Carson City Public Reading Facilities for review. The Community Advisory Board (CAB) may request copies of the documents by contacting the CAB office at **ntscab@nv.doe.gov**. Submit comments regarding a decision document to Tim Murphy (NDEP) at **TMurphy@ndep.nv.gov** within 30 days of the document's release. Public Reading Facility addresses are listed below.

CAU Number	CAU Description	Document	Approximate Submittal Date
539	Areas 25 and 26 Railroad Tracks	SAFER Plan	6/10/10

Site Information for CAU 539, Areas 25 and 26 Railroad Tracks
Location: Areas 25 and 26
CAU Brief History: Tracks were used to provide movement of reactors during Nuclear Rocket and Engine Development.
Contaminants of Concern: Radionuclides; Uranium and Fission Products
Type of Corrective Action Taking Place: Through a SAFER Plan, the tracks will be investigated followed by appropriate Use Restrictions based on investigation results.

Southern Nevada Public Reading Facility
c/o Nuclear Testing Archive
775 East Flamingo Road
Las Vegas, NV 89119

Northern Nevada Public Reading Facility
Nevada State Library and Archives
100 N. Stewart Street
Carson City, NV 89701-4285

The following is a list of all documents submitted to the Public Reading Facilities during April 2010. Attached is the Introduction from the document listed below.

CAU Number	CAU Description	Document
98	Frenchman Flat	Phase II Document Overview, Revision I

Introduction for CAU 98 CAIP Phase II Document Overview, Revision I

Underground testing of nuclear weapons in deep vertical shafts and tunnels was conducted from 1951 to 1992 at the Nevada Test Site (NTS), which is approximately 65 miles northwest of Las Vegas, Nevada. The Frenchman Flat area (Figure 1-1), the subject of this overview document, was used for seven years with 10 underground nuclear tests conducted (Figure 1-2). Seven tests were detonated in the northern part of the basin (called the Northern Testing Area), and three were detonated in the central part of the basin (called the Central Testing Area). All underground nuclear tests in Frenchman Flat were conducted in shafts. Shaft nuclear tests were exploded at the bottom of drilled or mined vertical holes (DOE/NV, 1994).

Table 1-1 presents information relative to the 11 corrective action sites in Frenchman Flat. The corrective action sites comprise the 10 underground nuclear tests and a well used for the CAMBRIC radionuclide migration experiment, RNM-2S; see Section 2.2 for more information. All underground nuclear tests conducted in Frenchman Flat, except for two, have yield ranges specified as less than 20 kilotons (kt) (DOE/NV, 2000).

The U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Site Office (NNSA/NSO) initiated the Underground Test Area (UGTA) Subproject to assess and evaluate radiologic groundwater contamination resulting from underground nuclear testing at the NTS. These activities are overseen by the *Federal Facility Agreement and Consent Order* (FFACO) (1996, as amended March 2010). For Frenchman Flat, the UGTA Subproject addresses media contaminated by the underground nuclear tests, which is limited to geologic formations within the saturated zone or 100 meters (m) or less above the water table. Transport in groundwater is judged to be the primary mechanism of migration for the subsurface contamination away from the Frenchman Flat underground nuclear tests.

The intent of the UGTA Subproject is to assess the risk to the public from the groundwater contamination produced as a result of nuclear testing. The primary method used to assess this risk is the development of models of flow and contaminant transport to forecast the extent of potentially contaminated groundwater for the next 1,000 years, establish restrictions to groundwater usage, and implement a monitoring program to verify protectiveness. For the UGTA Subproject, contaminated groundwater is that which exceeds the radiological standards of the *Safe Drinking Water Act* (CFR, 2009) the State of Nevada's groundwater quality standard to protect human health and the environment. Contaminant forecasts are expected to be uncertain, and groundwater monitoring will be used in combination with land-use control to build confidence in model results and reduce risk to the public.

Modeling forecasts of contaminant transport will provide the basis for negotiating a compliance boundary for the Frenchman Flat Corrective Action Unit (CAU). This compliance boundary represents a regulatory-based distinction between groundwater contaminated or not contaminated by underground testing. Transport modeling simulations are used to compute radionuclide concentrations in time and space within the CAU for the 1,000-year contaminant boundary. These three-dimensional (3-D) concentration simulations are integrated into probabilistic forecasts of the likelihood of groundwater exceeding or remaining below the radiological standards of the *Safe Drinking Water Act* (CFR, 2009) defined as the contaminant boundary. Contaminant boundaries are not discrete predictions of the location or concentration of contaminants, but instead are spatial representations of the probability of exceeding *Safe Drinking Water Act* radiological standards. The forecasts provide planning tools to facilitate regulatory decisions designed to protect the health and safety of the public.

A compliance boundary will be negotiated between the Nevada Division of Environmental Protection (NDEP) and NNSA/NSO for the Frenchman Flat CAU. Monte Carlo analysis of multiple models is used to generate an ensemble of contaminant boundary forecasts (see Section 5.3). The ensemble of contaminant boundary forecasts for the CAU will provide the initial technical basis for negotiation of the compliance boundary. The NNSA/NSO must demonstrate with an acceptable level of confidence (reasonable expectation), gained through implementation of the UGTA corrective action strategy, that groundwater outside the compliance boundary meets the radiological standards of the *Safe Drinking Water Act* (CFR, 2009).

This document summarizes and provides linkages among the data collection and modeling activities – and associated technical reports – that have been completed for the Frenchman Flat area in support of the Subproject and FFACO goals. This document does not present new information, but instead provides a synopsis of more than 50 years of characterization and modeling activities and how these activities support the UGTA Subproject objectives and, specifically, the Phase II Corrective Action Investigation (CAI), which was initiated in 2001.