Environmental Management (EM) Complex Overview

Scott Wade
Assistant Manager for Environmental Management
CAB Member Orientation
May 25, 2010

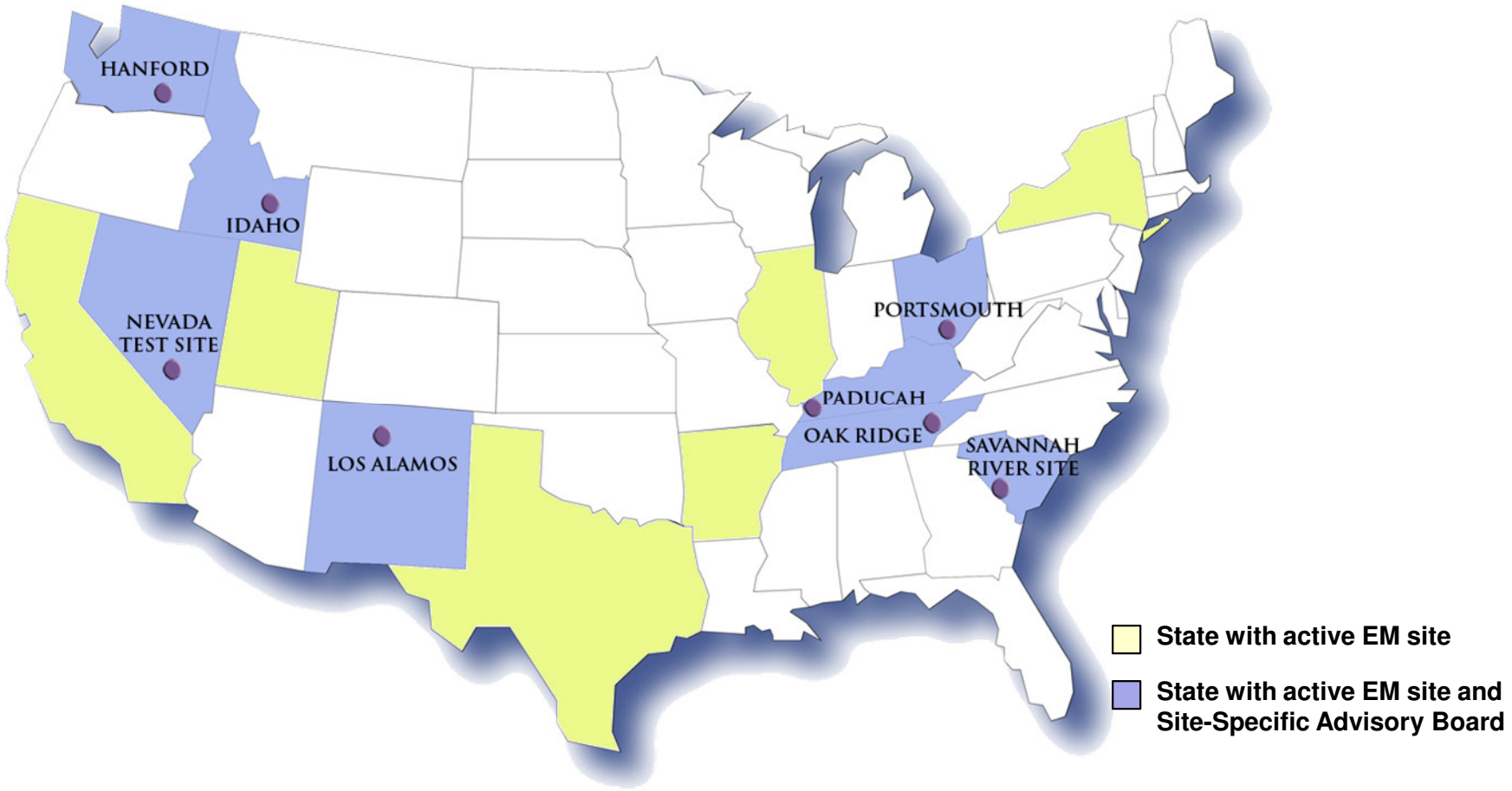
History of Environmental Management

- The U.S. nuclear weapons complex contaminated waste, water, soil and structures that will remain radioactive for thousands of years
- U.S. Department of Energy created the Office of Environmental Management in 1989 to clean-up legacy contamination resulting from this nuclear research and testing

National Environmental Management Program Responsibility

- Environmental Management is responsible for:
  - Remediating extensive surface and groundwater contamination
  - Safely disposing large volumes of nuclear waste
  - Decontaminating and decommissioning (D&D) contaminated facilities no longer needed

Environmental Management Sites



Hanford (Washington)

Hanford

- Located in southeastern Washington State; Columbia River runs through the northern portion of the site; and the City of Richland is located on the southern border
- Established in 1943 for plutonium production, chemical processing, and research and development of nuclear weapons
- Current mission is to manage facilities and inventories of special materials, remediate contamination, and support national research efforts in environmental and other sciences

D&D at the Hanford Plutonium Finishing Plant (PFP)

Idaho

Test Area North
INL Site
Naval Reactors Facility
Reactor Technology Complex
Idaho Nuclear Technology and Engineering Center
Materials and Fuels Complex
Critical Infrastructure Test Range Complex
Central Facilities Area
Power Burst Facility
Research and Education Campus
Radioactive Waste Management Complex

Idaho

- Located in southeastern Idaho desert near northwest end of the Snake River Plain, 25 miles east of Idaho Falls

- Established in 1949 – missions included designing and testing nuclear reactors and reprocessing spent nuclear fuel
- Current missions include nuclear energy research, national security, and environmental management

Tank removed during D&D at the Idaho Test Area North will be treated and prepared for disposal

Los Alamos (New Mexico)

Los Alamos

- Located in north-central New Mexico, approximately 60 miles northeast of Albuquerque and 25 miles northwest of Santa Fe
- Established in 1943 to design and develop nuclear weapons
- Current missions includes multi-program national laboratory with research and development programs in broad range of scientific and technical fields; and environmental risk reduction relative to current activity as well as remediation of legacy waste

Large industrial vacuum system being used in the Canyon Floor of the Los Alamos "Acid Canyon" to remove high volumes of contaminated soil

Nevada Test Site (NTS)

- Located in the southern Nevada desert 65 miles northwest of Las Vegas
- Established in 1950 to conduct field testing of nuclear explosives
  - 100 total atmospheric tests (until 1962)
  - 828 total underground tests (until 1992)
- Current missions are National Security and Environmental Management

Oak Ridge Reservation (Tennessee)

Oak Ridge Reservation

- Located in east Tennessee; entirely within the city limits of Oak Ridge; and bordering the Clinch River
- "Secret City" established in early 1940s by the U.S. Army Corps of Engineers for the Manhattan Project to produce enriched uranium
- Current missions include energy technologies and science research (Oak Ridge National Laboratory); national security (Y-12 National Security Complex); and environmental management of legacy contamination and waste

Paducah Gaseous Diffusion Plant (Kentucky)

Paducah Gaseous Diffusion Plant

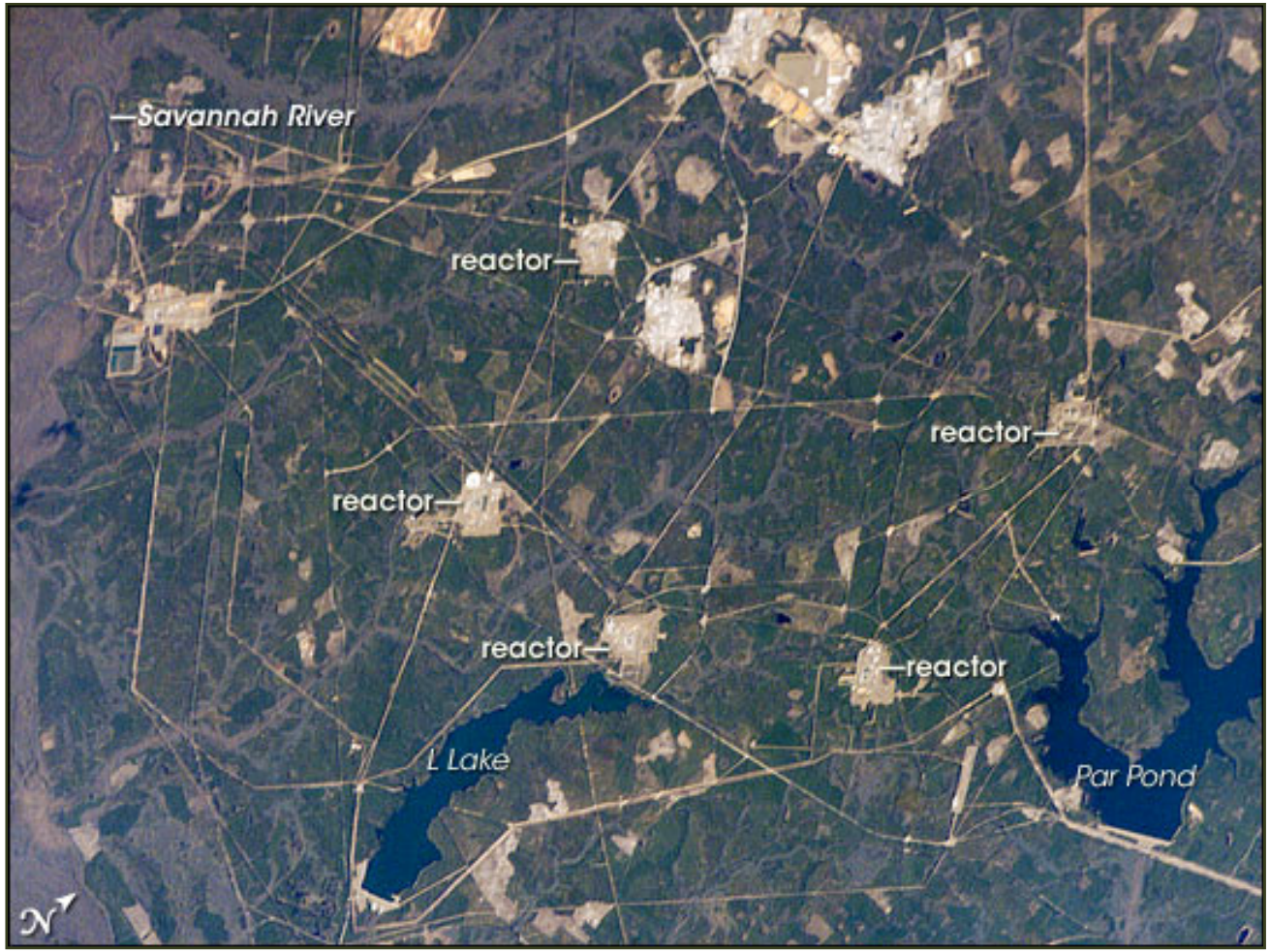
- Located in rural western Kentucky, 15 miles from the city of Paducah near the Ohio and Mississippi rivers; sister-site to the Portsmouth plant in Piketon, Ohio
- Established in 1952 to produce enriched uranium for the Federal Government and commercial nuclear power and later for low-enriched uranium production
- Current missions include environmental cleanup, waste management, depleted uranium conversion, deactivation and decommissioning, re-industrialization, and long-term stewardship

Portsmouth Gaseous Diffusion Plant (Ohio)

Portsmouth Gaseous Diffusion Plant

- Located in Piketon, Ohio along the Scioto River
- Established in 1954 to support expansion of highly-enriched uranium production for military reactors and nuclear weapons and later for low-enriched uranium production for nuclear power plants
- Current missions include decontaminating uranium feed material, cold-standby for uranium deposit removal, and other specialized support services

Savannah River Site (South Carolina)



Savannah River Site

- Located in South Carolina on the Savannah River which borders Georgia; close to Augusta, Georgia and Aiken, South Carolina
- Established in the early 1950s to produce basic materials used to fabricate nuclear weapons, primarily tritium and plutonium-239
- Current missions include:
  - MOX Fuel Fabrication Facility
  - Pit Disassembly and Conversion Facility
  - Plutonium Immobilization Facility
  - Savannah River National Laboratory
  - Environmental Management program addressing safe stabilization, treatment, and disposition of legacy nuclear materials, spent nuclear fuel and waste

EM Sites Working Together

- Sites offering essential complex-wide cleanup resources
  - Idaho National Laboratory – Central Characterization Facility for transuranic waste
  - Nevada Test Site – low-level and mixed low-level waste disposal
  - Oak Ridge – mixed waste treatment
  - Savannah River – transuranic waste consolidation in preparation for disposal at the Waste Isolation Pilot Plant
  - Waste Isolation Pilot Plant – transuranic/mixed transuranic waste disposal

Fernald Before Cleanup Began in 1991

Fernald After Cleanup Completed in 2006

Environmental Management at the Nevada Site Office

Scott Wade
Assistant Manager for Environmental Management

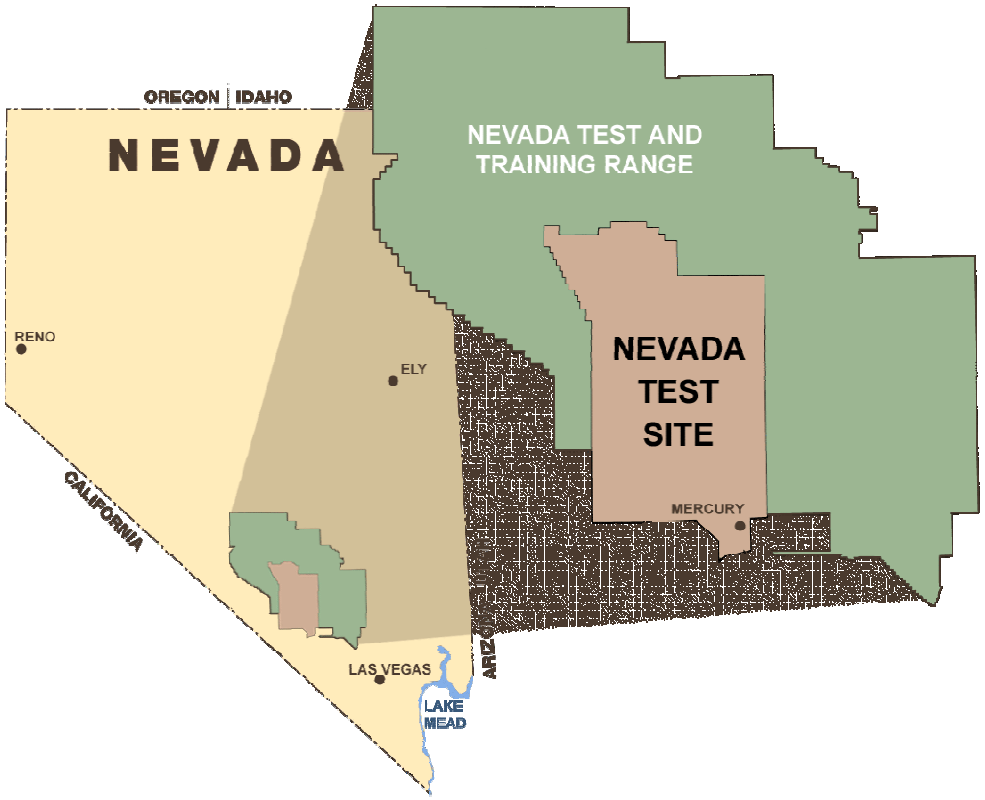
Community Advisory Board Orientation
May 25, 2010

Federal Responsibilities

- Two federal entities responsible for Nevada Site Office activities
  - National Nuclear Security Administration is responsible for stockpile stewardship and overarching management of the Nevada Test Site (not within the CAB's purview)
  - The Department of Energy's Office of Environmental Management is responsible for remediating historic locations on the Nevada Test Site and portions of the Nevada Test and Training Range (within the CAB's purview)

The Nevada Test Site

- Approximately 1,375 square miles of federally owned and controlled land – surrounded by approximately 4,500 square miles of federally owned and controlled land
- Located 65 miles northwest of Las Vegas

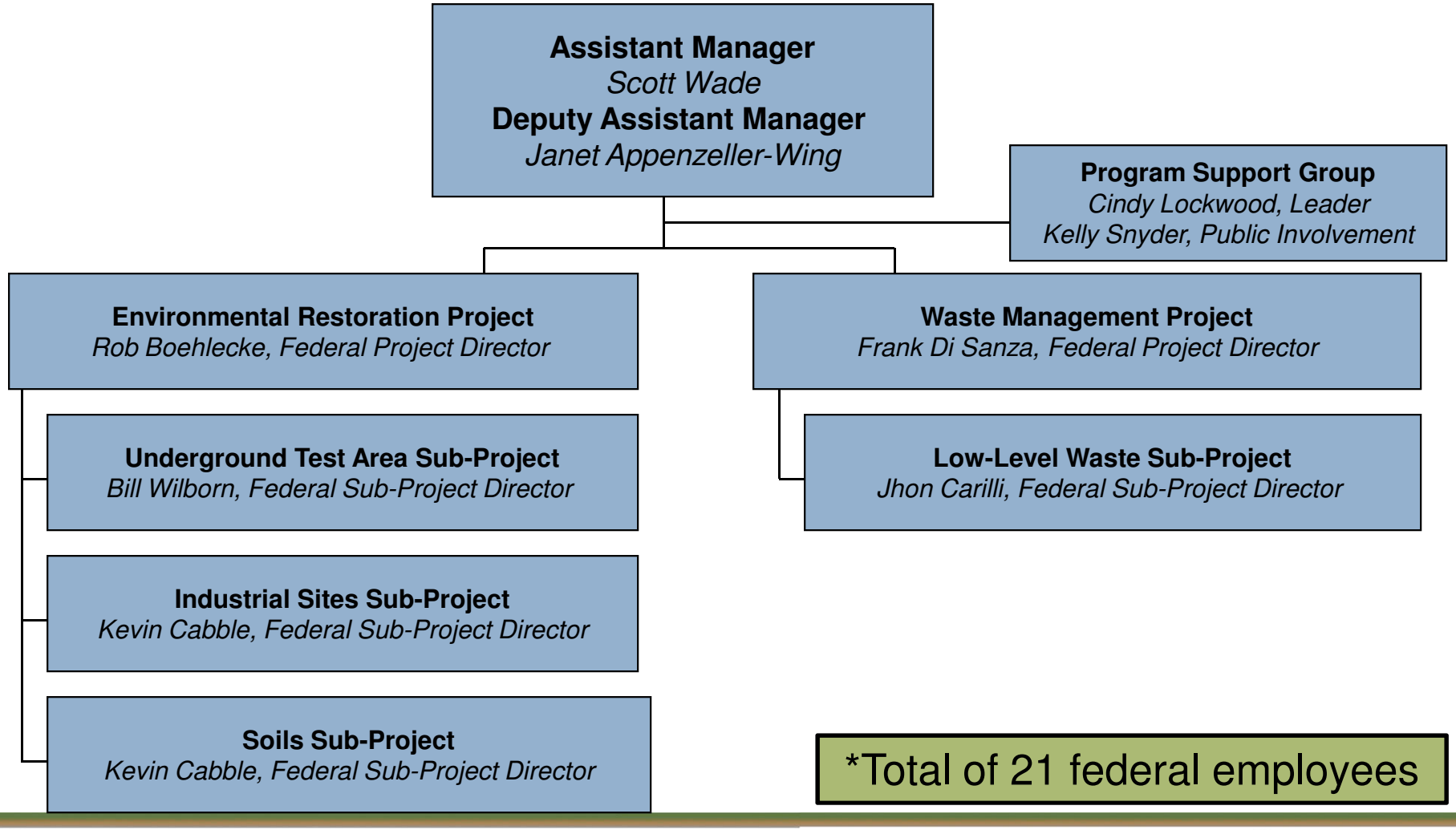


Environmental Management Projects

- Environmental Restoration
  - Underground Test Area
  - Industrial Sites
  - Soils

- Waste Management
  - Low-Level Waste

Environmental Management Personnel*



*Total of 21 federal employees

Environmental Management Program Funding ($K)

Fiscal Year	Funding†
2010	$76,275*
2011	$81,854**
2012	$105,169**

† Does not include Program Direction or American Reinvestment and Recovery Act dollars
* Base Program
** FY 2011 - 2012 baseline numbers

State of Nevada's Role

- The State of Nevada's Division of Environmental Protection (NDEP) provides programmatic and regulatory oversight of Environmental Restoration and Waste Management activities conducted by the DOE's Environmental Management in the state of Nevada
- Participates as CAB liaison

Key Documents

- Federal Facilities Agreement and Consent Order (FFACO)
- Federal Facility Compliance Act-Consent Order (FFCAct-CO)

Industrial Sites Sub-Project Overview

Kevin Cabble
Industrial Sites Federal Sub-Project Director
Community Advisory Board Orientation
May 25, 2010

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure
www.em.doe.gov

Why was the Sub-Project Formed?

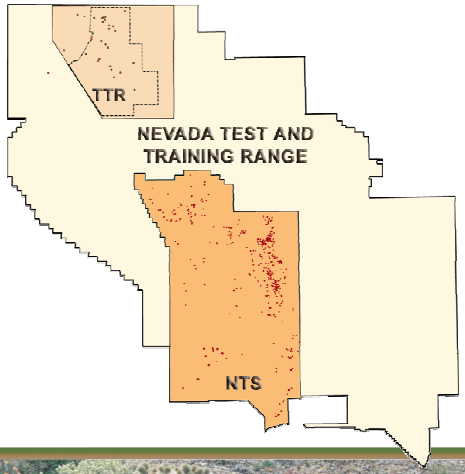
- Portions of the facilities and land at the Nevada Test Site and Nevada Test and Training Range were used in direct support of nuclear testing
  - Facilities included such things as gas stations, motor pools, worker housing, and research buildings
- Activities resulted in some environmental contamination and subsequent hazardous and radioactive waste generation
- Nevada Site Office Environmental Management Program established the Industrial Sites sub-project to remediate the contaminated sites

Background Information

- Industrial Sites may include leach fields, sumps, disposal wells, tanks, contaminated waste piles, ordnance sites, etc.
- Contaminants of Concern may include hazardous chemicals, unexploded ordnance, and radionuclides
- Potential risks are to workers and the environment

Background Information
(continued)

- Tonopah Test Range (part of the Nevada Test and Training Range) sites were addressed early (only one site remains)
- NTS sites are remediated in accordance with future land-use planning



Sub-Project Terminology

- Corrective Action Site (CAS) - a site that has been identified as needing remediation
- Corrective Action Unit (CAU) - a grouping of CASs that are similar in remediation technique, type of contaminants or proximity to each other

There are 198 CAUs in the Industrial Sites sub-project which consist of 1,112 CASs

Sub-Project Timeline

- 1989- Industrial Sites Sub-Project was initiated
- 1996- Federal Facilities Agreement and Consent Order (FFACO) entered into an agreement with the State of Nevada that outlines a series of activities that must be completed before an Industrial Site can be designated as “clean” or “closed in place” with restrictions
- 2013- All Industrial Sites scheduled to be closed except CAU 114, Area 25 EMAD facility
- 2018- Industrial Sites Sub-Project scheduled end date

ENVIRONMENTAL MANAGEMENT PROGRAM

Industrial Sites Funding ($K)

Fiscal Year	Base Program	ARRA
2008	$17,024	$0
2009	$8,464	$28,271
2010	$6,357	
2011†	$10,015	
2012†	$3,250	$0

† FY 2011-2012 are baseline numbers

ENVIRONMENTAL MANAGEMENT PROGRAM

Steps to Cleanup

- Preliminary research conducted on each CAS
- Based on available knowledge, specific remediation (clean-up) process is identified for each CAS

Remediation Processes

- Three remediation process options
  - Housekeeping
  - Complex
  - Streamlined

Remediation Processes
(continued)

- Housekeeping Process
  - Remove debris
  - Dispose of generated waste
  - Verify contamination has been removed

Remediation Processes
(continued)

- Complex Process - Greater level of complexity requiring multiple steps
  - Corrective Action Investigation Plan (CAIP) - details the investigation plan and provides information for planning investigation activities
  - Site Investigation – act of conducting field characterization activities
  - Corrective Action Decision Document (CADD) - describes the results of the characterization, multiple corrective action alternatives, and the recommended corrective action alternative and the rationale for its selection
    - Must be approved by the State of Nevada

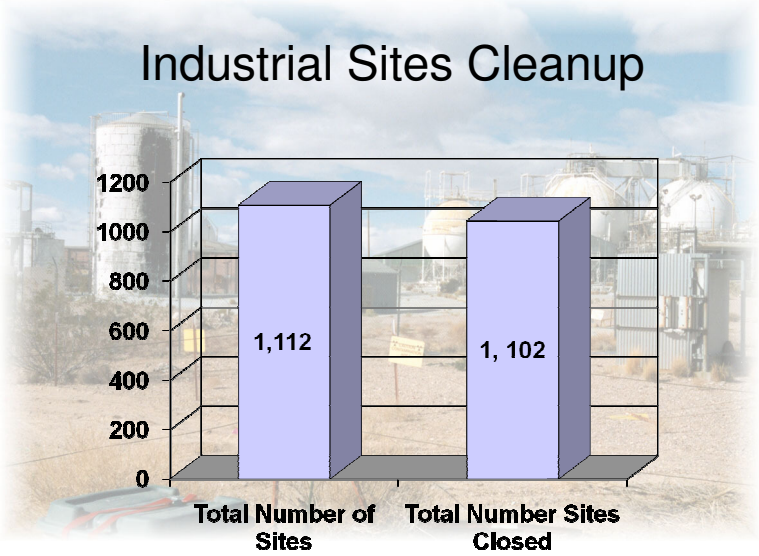
Remediation Processes
(continued)

- Complex Method - continued
  - Corrective Action Plan (CAP) - plan for implementing the selected corrective action
  - Closure Field Work - act of implementing the chosen corrective action in the field
  - Closure Report (CR) - provides an overview and results of the corrective actions implemented, closure verification information, and use restriction and monitoring requirements (when applicable)

Remediation Processes
(continued)

- Streamlined Approach for Environmental Restoration (SAFER) Process
  - Sites with extensive process knowledge and/or existing sampling data can combine multiple steps
  - Two reports are produced
    - SAFER Plan
    - Closure Report

Industrial Sites Cleanup



Examples of Past Activities

Super Kukla at the Nevada Test Site

Examples of Past Activities
(continued)

R-MAD at the Nevada Test Site

Examples of Past Activities
(continued)

Test Cell A at the Nevada Test Site

FY 2010 Activities

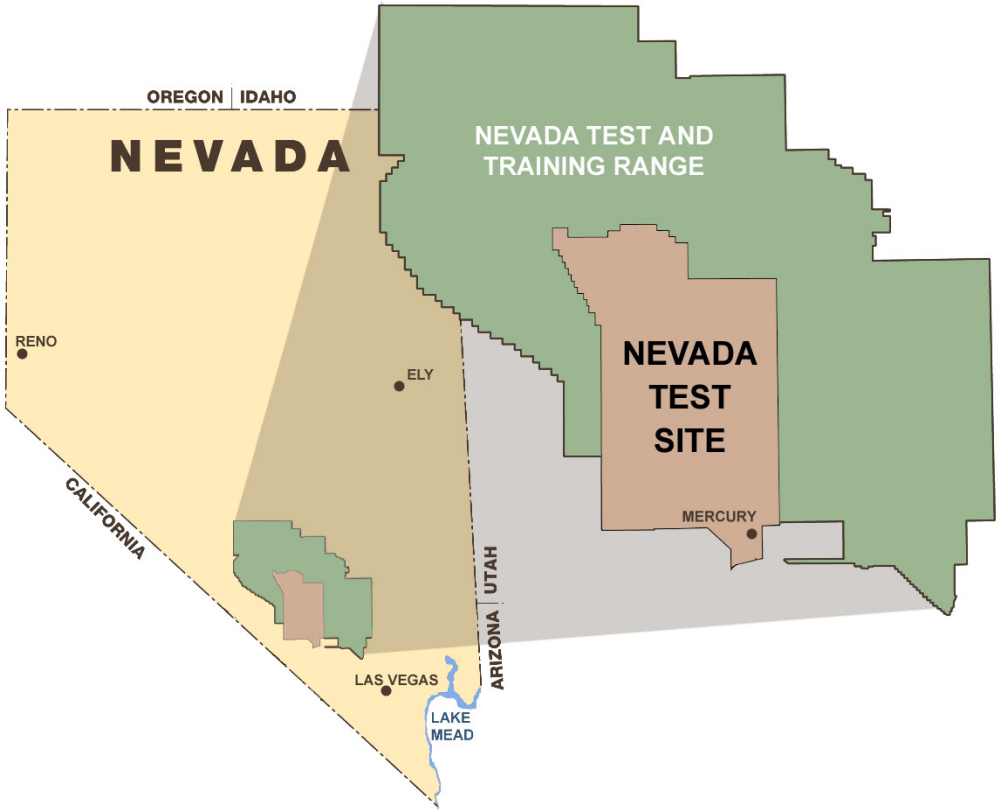
- CAU 113, RMAD - Demolition
- CAU 117, Pluto - Start demolition
- Post Closure Inspections

Soils Sub-Project Overview

Kevin Cabble
Soils Federal Sub-Project Director
Community Advisory Board Orientation
May 25, 2010

Why was the Sub-Project Formed?

- Atmospheric nuclear weapons tests, nuclear safety experiments, and evaluation tests for peaceful uses of nuclear explosives conducted at the Nevada Test Site (NTS) and Nevada Test and Training Range (operated by the U.S. Air Force) resulted in the radioactive contamination of surface soils



Background

- The Soils sub-project is responsible for:
  - Characterizing and/or remediating surface soil contamination
    - Characterize means to identify the nature and extent of the contamination present
    - Remediating means to select a closure option (clean close, closure in place, etc)
  - Ensuring appropriate controls (i.e. postings, barriers, etc.) are in place at the sites with remaining contamination
  - Conducting long-term monitoring of sites
- State of Nevada provides oversight under the Federal Facility Agreement and Consent Order (FFACO)

Sub-Project Terminology

- Corrective Action Site (CAS) - a site that has been identified as needing remediation
- Corrective Action Unit (CAU) - a grouping of CASs that are similar in remediation technique, type of contaminates or proximity to each other

There are 20 CAUs in the Soils sub-project which consist of 128 CASs

Sub-Project Timeline

- 1981 to 1986 – Surveyed surface soils to identify the level and location of radioactive contamination
- 1996 to 1997 – Remediated surface soils at Double Tracks and Clean Slate I

Sub-Project Timeline
(continued)

- 1995 to 2005 – DOE, the U.S. Air Force, and State of Nevada worked together to develop land use scenarios for the TTR sites
- 2006 – Ground-based radiological surveys performed for Clean Slate II and III
  - Determined the appropriate radiological contaminant boundary
  - Contaminant boundary posted for Clean Slate II and III

Sub-Project Timeline
(continued)

- 2007 – Aerial radiological survey performed (Clean Slate sites and Double Tracks) and gross contaminant migration is not evident
- 2009 – First historic atmospheric weapons test location (T-4 in Area 4 at the Nevada Test Site) to receive closure approval from the State of Nevada

Soils Sub-Project Funding ($K)

Fiscal Year	Base Program	ARRA
2008	$2,514	$0
2009	$2,722	$3,392
2010	$3,635	
2011†	$4,647	
2012†	$5,051	$0

† FY 2011 – 2012 are baseline numbers

FY 2010 Activities

- Complete the following Corrective Action Investigations:
  - CAU 367, Area 10 Sedan, Ess and Uncle Unit Craters
  - CAU 372, Area 20 Cabriolet/Palanquin Unit Craters
  - CAU 374, Area 20 Schooner Unit Crater

Underground Test Area Sub-Project Overview

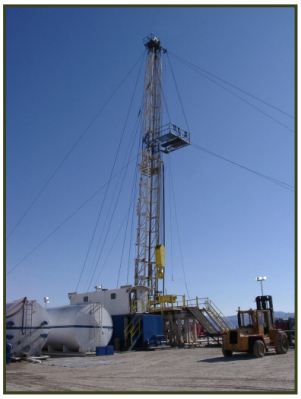
Bill Wilborn
Underground Test Area Federal Sub-Project Director
Community Advisory Board Orientation
May 25, 2010

Why was the Sub-Project Formed?

- 1951 to 1992: United States government conducted 828 underground nuclear tests at the Nevada Test Site (NTS) at depths ranging from approximately 90 to 4,800 feet below the ground surface
- About one-third of these tests occurred in, near, or below the water table, which resulted in some contamination of the area's groundwater

Background

- The UGTA sub-project evaluates the historic testing impacts on groundwater resources and studies the extent of contaminant migration
  - UGTA is not responsible for monitoring the groundwater (this work is performed by the National Nuclear Security Administration)

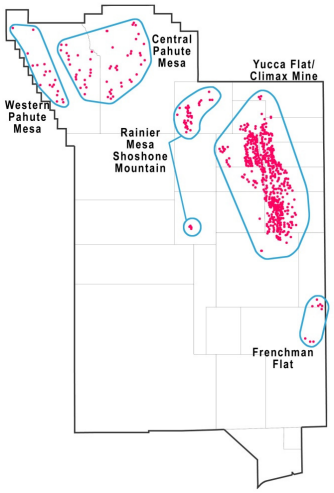


Background
(continued)

- UGTA focuses on collecting multiple sources of field data to fine-tune existing 3-D computer models
  - These models predict the location of groundwater, flow paths and transport parameters
- Ultimately, the models will be used to establish a long-term monitoring network
- UGTA Sub-project completion is scheduled for 2027

Corrective Action Units

- There are five Corrective Action Units (CAUs) that make up the UGTA sub-project
  - CAUs are determined by location and type of contamination



Technical Working Group

- UGTA Federal staff continually work with outside organizations to ensure a collaborative approach to understand the nature and extent of groundwater contamination
  - Lawrence Livermore National Laboratory
  - Los Alamos National Laboratory
  - Desert Research Institute
  - United States Geological Survey
  - State of Nevada, Division of Environmental Protection
  - National Security Technologies, LLC
  - Navarro Nevada Environmental Services

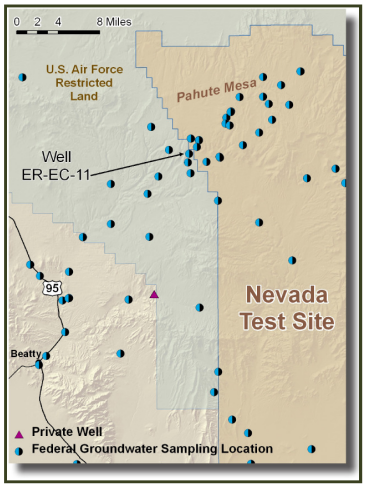
UGTA Sub-Project Funding ($K)

Fiscal Year	Base Program	ARRA
2008	$21,205	$0
2009	$31,127	$12,395
2010	$38,016	
2011†	$28,482	
2012†	$37,557	$0

† FY 2011 – 2012 are baseline numbers

2009 Activities

- Drilled four wells on and near Pahute Mesa
  - One of which was at the CAB recommended well location
- Detected groundwater contamination from historic nuclear testing beyond the site boundaries for the first time (Well ER-EC-11)
  - Contamination on Air Force land
  - 14 miles from nearest private well
- Revised the UGTA strategy



2010 Activities

- Complete independent Peer Review for the Frenchman Flat CAU
- Drill three new wells on and near Pahute Mesa

Low-Level Waste Sub-Project Overview

Jhon Carilli
Low-Level Waste Federal Sub-Project Director
Community Advisory Board Orientation
May 25, 2010

What is Low-Level Waste?

- Radioactive waste not classified as high-level waste, transuranic waste, spent fuel, or by-product material.
- Typical waste includes metal, debris, soils, clothing, tools, etc.
- Mixed Low-Level Waste (MLLW) contains low-level waste (LLW) *and a* hazardous component (i.e. toxic, corrosive, reactive, ignitable or is listed by EPA as a hazardous waste)

Why was the Sub-Project Formed?

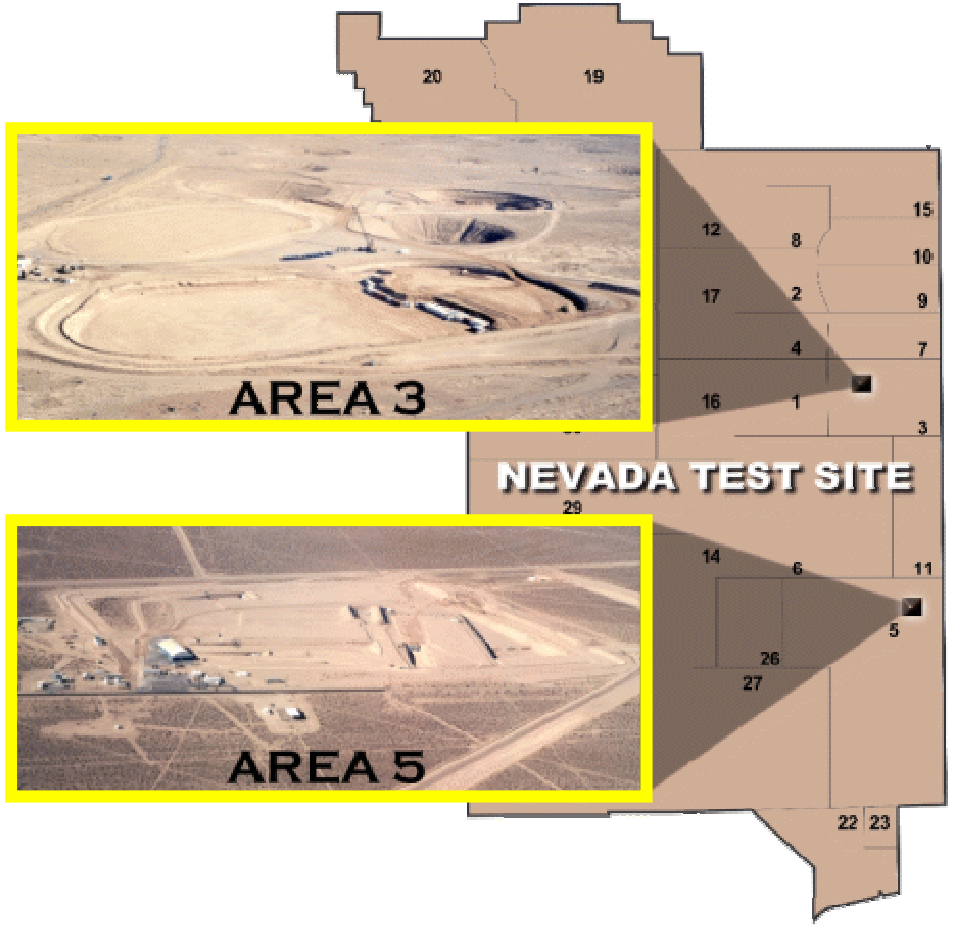
- Cold War-related activities and nuclear research generated LLW at sites across the country
- U.S. Department of Energy (DOE) is responsible for consolidating and disposing LLW generated by DOE clean-up activities
  - Ensures the safety of the public
  - Allows for the permanent closure of these sites

Why was the Sub-Project Formed?
(continued)

- The Nevada Test Site (NTS) was chosen due to its isolated location and arid climate
  - No groundwater pathways out of basins under current climate conditions
  - Deep groundwater (~700 feet – 1,600 feet)
  - Low precipitation (5-7 inches per year)
- Currently, the NTS is the only federal site disposing off-site generated LLW

Sub-Project Locations

- LLW can be disposed at two disposal sites at the NTS
  - Area 3 uses subsidence craters created by past underground nuclear tests to dispose of bulk and containerized waste
  - Area 5 uses engineered shallow-land burial to dispose containerized waste



Sub-Project Locations
(continued)

- Area 3 Radioactive Waste Management Site
  - Seven craters, representing five disposal cells
  - Total disposed volume is nearly 19 million cubic feet
  - Currently in cold stand-by (not active)

Sub-Project Locations
(continued)

- Area 5 Radioactive Waste Management Site
  - 34 disposal cells
    - 26 operationally closed
    - eight active
    - one for MLLW

  - Total current disposed volume is more than 19 million cubic feet (~33 football fields filled 10 feet high)

Area 5 Monitoring Activities

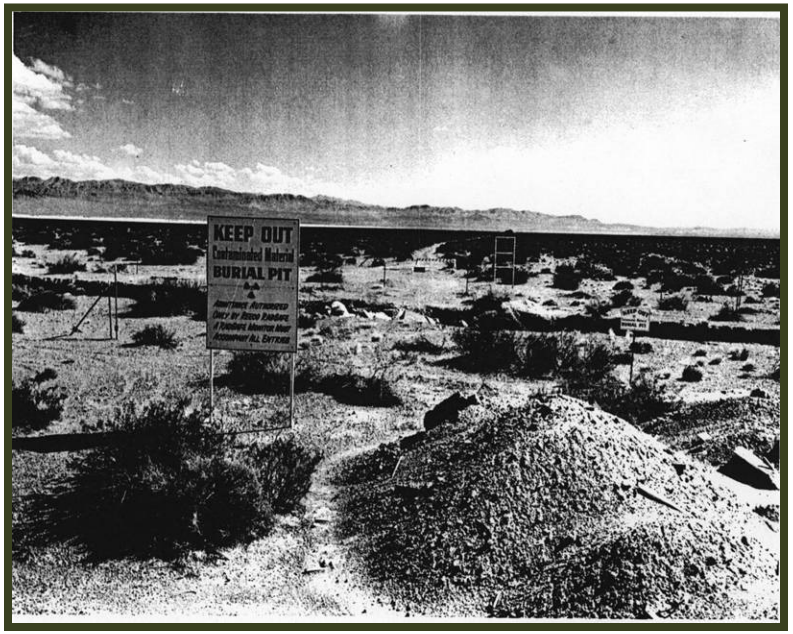
- Monitoring activities
  - Ensure the safety of workers and the public
  - Provide a measure of performance
- Continuous and ongoing

Monitor (Type)	Number of Locations
Air	4
Groundwater	3
Meteorology	3
Radon	20
Soil Gas	1
Soil Moisture	8
TLD*	16

* Thermoluminescent Dosimeters

Sub-Project Timeline

- 1953 – Disposed waste generated by weapons testing activities in Area 5
- 1968 – Began disposal in Area 3 subsidence craters
- 1976 – Disposed first off-site generated LLW (from Mound Laboratories in Ohio) at the NTS



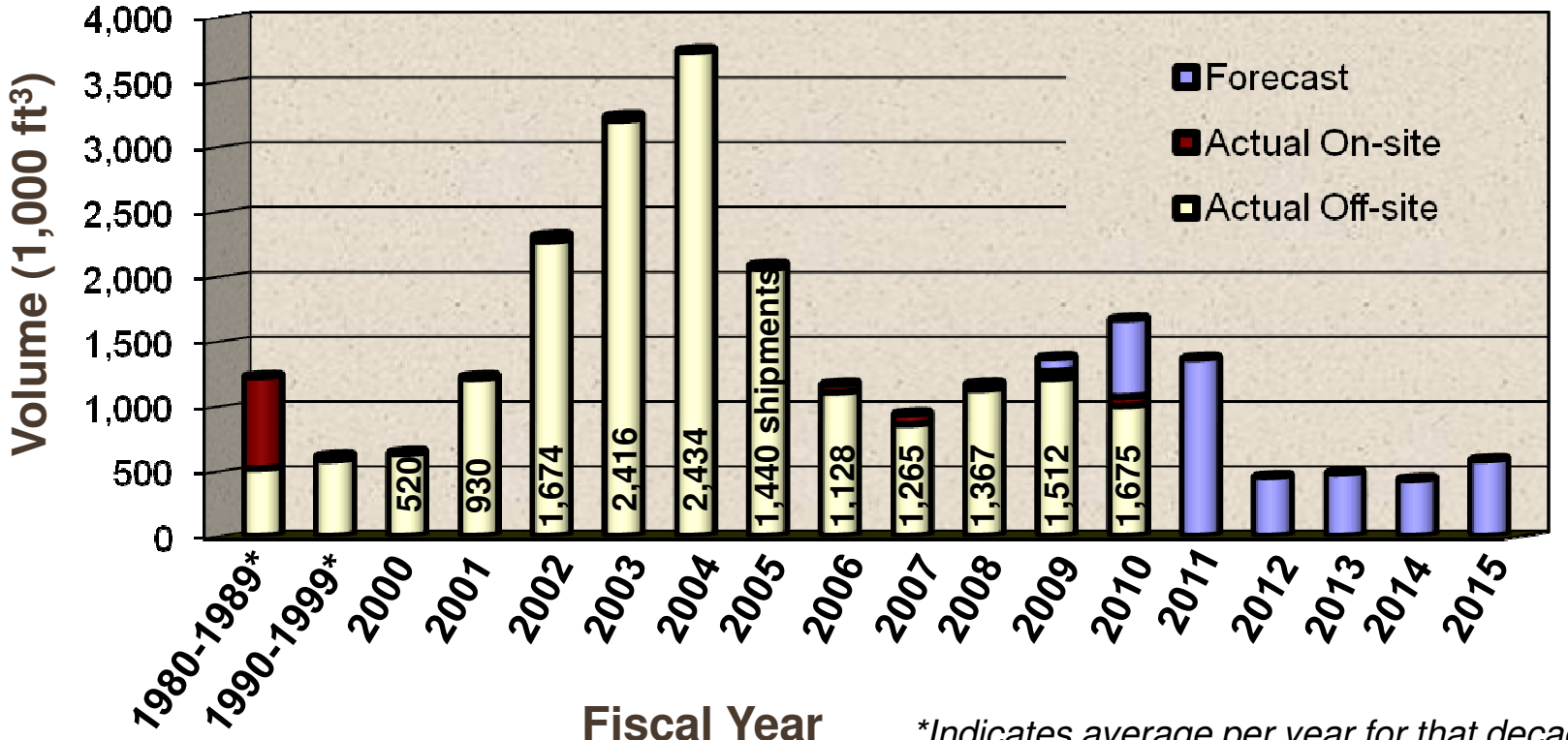
Sub-Project Timeline
(continued)

- 2005 – NTS received approval from the State of Nevada to dispose off-site generated MLLW through November 2010 or up to 20,000 cubic meters
- 2009 – Submitted permit application to State of Nevada for a MLLW disposal unit

Projected Sub-Project Timeline

- June 2010 – Submit permit application to State of Nevada for a Mixed Waste Storage Unit
- Summer 2010 – Receive approval from State of Nevada to construct new Mixed Low-Level Waste disposal unit
- Winter 2011 – Begin disposing Mixed Low-Level Waste in new disposal unit
- 2027 – EM will transfer responsibility of sub-project to the agency responsible for the NTS

NTS LLW/Mixed LLW Disposal Volumes



*Indicates average per year for that decade

FY 2004 (total) – 3,743,292 ft³
FY 2005 (total) – 2,089,028 ft³
FY 2006 (total) – 1,172,949 ft³
FY 2007 (total) – 943,824 ft³

FY 2008 (total) – 1,174,656 ft³
FY 2009 (total) – 1,273,472 ft³
FY 2010 (as of 05-02-10) – 1,075,666 ft³

LLW and MLLW Sub-Project Funding ($K)

Fiscal Year	Base Program*	ARRA
2008	$19,995	$0
2009	$12,448	$0
2010	$4,971	$10,000
2011†	$23,291	$0
2012†	$21,900	$0

* Includes direct funded disposal fee
† FY 2011 – 2012 are baseline numbers

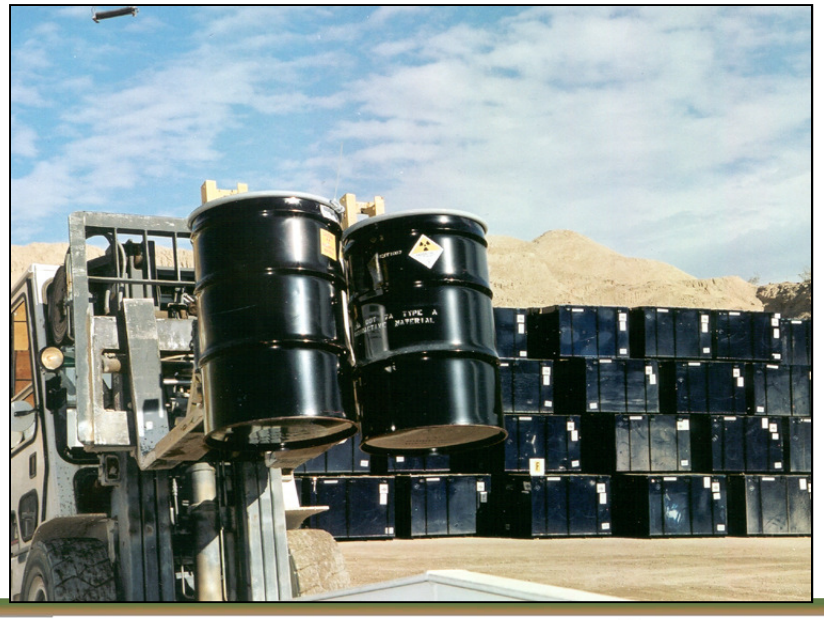
Sub-Project Funding
(continued)

- Since 2000, an additional $0.50 per cubic foot is assessed to the waste generators who ship waste to the NTS to provide assistance for funding for rural emergency response activities in affected counties
  - More than $8.9M distributed to date

Fiscal Year	Waste Volume (cubic feet)	Grant Dollars
2000	646,139	$323,070
2001	1,230,123	$615,062
2002	2,314,714	$1,157,357
2003	3,237,473	$1,618,736
2004	3,743,292	$1,871,646
2005	2,089,028	$1,044,514
2006	1,172,949	$586,474
2007	943,824	$471,912
2008	1,174,745	$587,372
2009	1,273,474	$636,737
TOTAL	17,825,761	$8,912,880

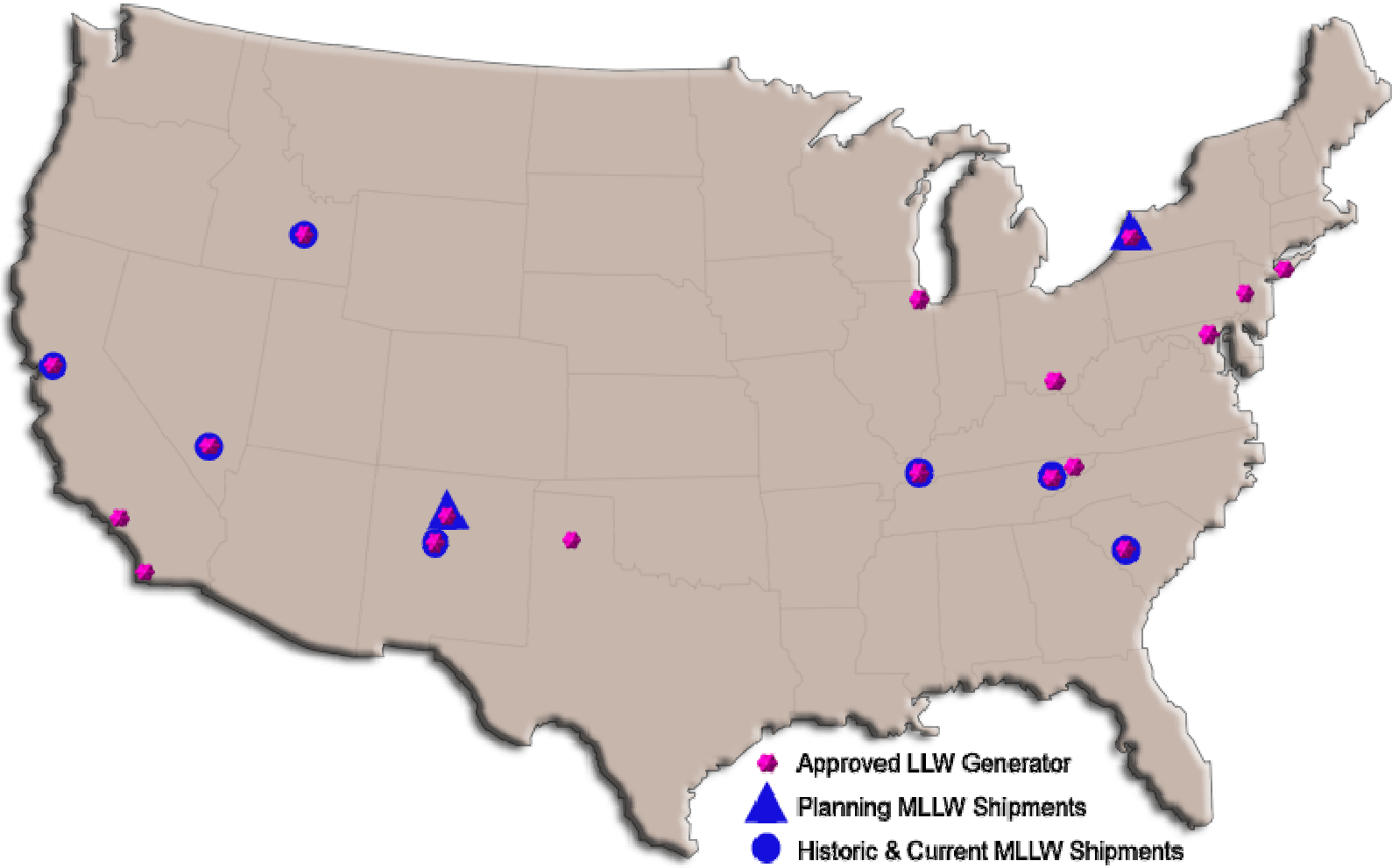
Current Activities
Waste Acceptance Criteria

- Waste disposed at the NTS must meet a rigorous disposal acceptance criteria
  - Waste must be generated at a DOE facility or defense-affiliated site
    - Waste may not contain free liquids
    - All waste must be containerized
      - Examples of containers include 55-gallon steel drums and carbon steel boxes



Current Activities
Waste Acceptance Criteria (continued)

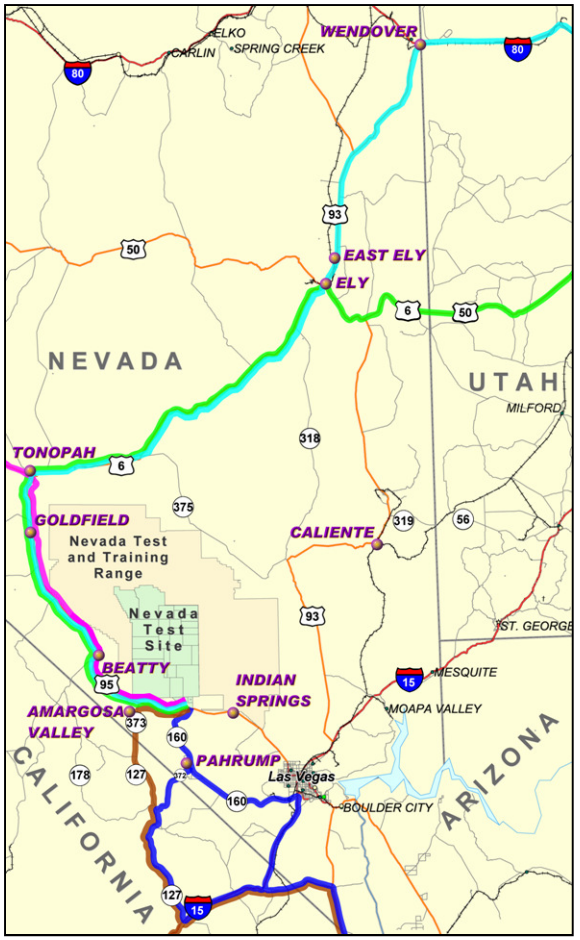
- Waste can only be disposed at the NTS from approved generators



Current Activities

Transportation

- Shipping of LLW is regulated by the U.S. Department of Transportation – not by DOE
- The Nevada Site Office (NSO) cannot enforce the use of specific transportation routes



Current Activities
Transportation (continued)

- NTS Waste Acceptance Criteria encourages shippers to travel along "preferred routes"
  - Avoid Las Vegas Spaghetti Bowl and I-215 (Las Vegas Beltway)

Note: The U.S. Department of Interior, Bureau of Reclamation currently prohibits shipments over the Hoover Dam

Environmental Management (EM) Outreach Initiatives

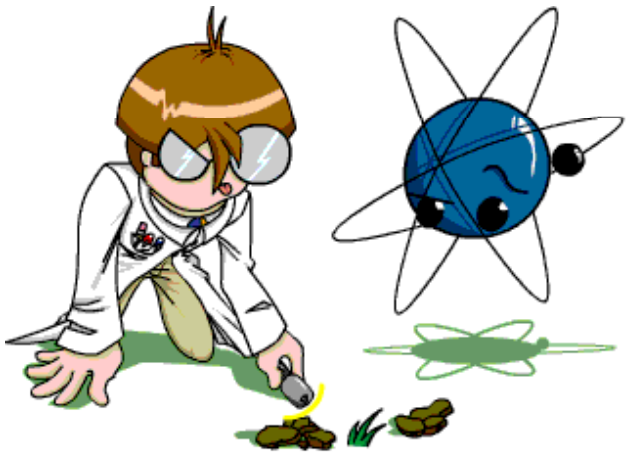
Kelly Snyder
Deputy Designated Federal Officer
Community Advisory Board Orientation
May 25, 2010

Environmental Management (EM) Outreach Initiatives

- Utilize a variety of outreach techniques to inform and involve stakeholders in EM activities through written, oral and visual methods
  - Community Advisory Board (CAB)
  - Operation Clean Desert
  - Fact Sheets
  - Displays
  - Website
  - EM News Flash
  - Public Reading Rooms / Electronic Mailing List

Operation Clean Desert

- Program used to teach elementary-age children about the EM program
- Concept created by the EM Student Forum
  - Grant funded from 2001-2006
- Public outreach tools include:
  - Display
  - Activity Book
  - Interactive Computer Game



Kid's Display

- White Pine County Fair
- Pahrump Harvest Festival
- Clark County Fair
- Boy Scout and Girl Scout troops
- Andre Agassi Boys & Girls Club
- Las Vegas and Pahrump elementary schools
- Lied Discovery Children's Museum (Las Vegas)
- Las Vegas Natural History Museum
- DOE Public Reading Room

Kid's Activity Book and Computer Game

- Take-away educational tools that gives children the opportunity to continue the educational process after they leave the display
- More than 9,200 activity books and 5,900 computer games have been distributed to date

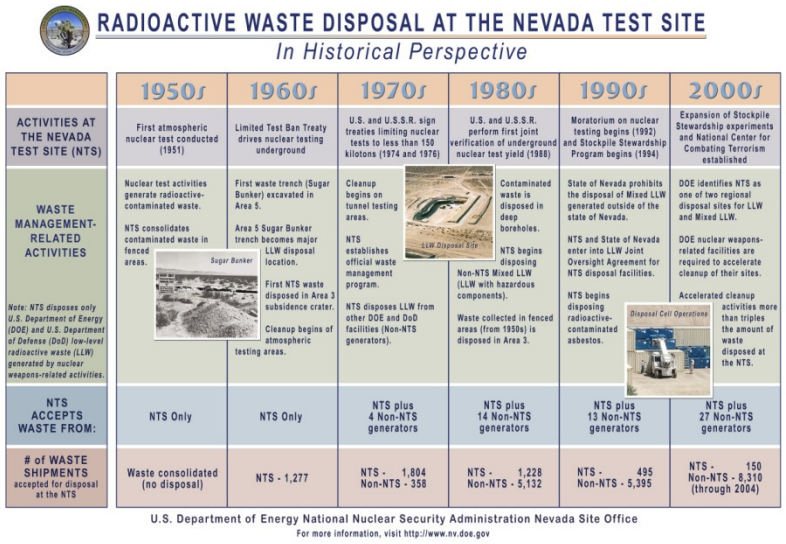
Fact Sheets

- More than 20 fact sheets available covering Waste Management, Environmental Restoration and related activities

- Available at libraries (Amargosa, Beatty, Pahrump, and White Pine County), Central Nevada Museum (Tonopah), DOE Public Reading Room (Las Vegas), and DOE facilities and website

Displays

- Transportation, Waste Disposal, and Groundwater displays have been located at:
  - Pahrump Library
  - Caliente Library
  - Beatty Library
  - Amargosa Library
  - Esmeralda County Repository Oversight Office
  - Central Nevada Museum (Tonopah)
  - White Pine County Library (Ely)



RADIOACTIVE WASTE DISPOSAL AT THE NEVADA TEST SITE

In Historical Perspective

	1950s	1960s	1970s	1980s	1990s	2000s
ACTIVITIES AT THE NEVADA TEST SITE (NTS)	First atmospheric nuclear test conducted (1951)	Limited Test Ban Treaty drives nuclear testing underground	U.S. and U.S.S.R. sign treaties limiting nuclear tests to less than 150 kilotons (1974 and 1976)	U.S. and U.S.S.R. perform first joint verification of underground nuclear test yield (1988)	Moratorium on nuclear testing begins (1992) and Stockpile Stewardship Program begins (1994)	Expansion of Stockpile Stewardship experiments and National Center for Combating Terrorism established
WASTE MANAGEMENT-RELATED ACTIVITIES Note: NTS disposes only U.S. Department of Energy (DOE) and U.S. Department of Defense (DoD) low-level radioactive waste (LLW) generated by nuclear weapons-related activities.	Nuclear test activities generate radioactive-contaminated waste. NTS consolidates contaminated waste in fenced areas.	First waste trench (Sugar Bunker) excavated in Area 5. Area 5 Sugar Bunker trench becomes major LLW disposal location. First NTS waste disposed in Area 3 subsidence crater. Cleanup begins of atmospheric testing areas.	Cleanup begins on tunnel testing areas. NTS establishes official waste management program. NTS disposes LLW from other DOE and DoD facilities (Non-NTS generators).	Contaminated waste is disposed in deep boreholes. NTS begins disposing Non-NTS Mixed LLW (LLW with hazardous components). Waste collected in fenced areas (from 1950s) is disposed in Area 3.	State of Nevada prohibits the disposal of Mixed LLW generated outside of the state of Nevada. NTS and State of Nevada enter into LLW Joint Oversight Agreement for NTS disposal facilities. NTS begins disposing radioactive-contaminated asbestos.	DOE identifies NTS as one of two regional disposal sites for LLW and Mixed LLW. DOE nuclear weapons-related facilities are required to accelerate cleanup of their sites. Accelerated cleanup activities more than triples the amount of waste disposed at the NTS.
NTS ACCEPTS WASTE FROM:	NTS Only	NTS Only	NTS plus 4 Non-NTS generators	NTS plus 14 Non-NTS generators	NTS plus 13 Non-NTS generators	NTS plus 27 Non-NTS generators
# of WASTE SHIPMENTS accepted for disposal at the NTS	Waste consolidated (no disposal)	NTS - 1,277	NTS - 1,804 Non-NTS - 358	NTS - 1,228 Non-NTS - 5,132	NTS - 495 Non-NTS - 5,395	NTS - 150 Non-NTS - 8,310 (through 2004)

U.S. Department of Energy National Nuclear Security Administration Nevada Site Office

For more information, visit http://www.nv.doe.gov

EM News Flash

- Published on an as-needed basis
- Distributed to mailing list, employees and media

April 20, 2010 — Nevada Site Office Environmental Management

EM NEWS FLASH

Public Meeting on the Proposed Storage of Mixed Low-Level Radioactive Waste at the Nevada Test Site

U.S. Department of Energy (DOE), National Nuclear Security Administration representatives will hold a public meeting on Monday, April 26, 2010, regarding the upcoming submittal of an application to the State of Nevada for a Resource Conservation and Recovery Act (RCRA) Part B permit to store mixed low-level radioactive waste prior to permanent disposal in Area 5 of the Nevada Test Site.

The public meeting will be held from 5:30 p.m. to 6:30 p.m. at the Bob Ruud Community Center, located at 150 North Highway 160 in Pahrump, NV.

Subject matter experts will give an overview presentation to discuss the proposed plans, and answer questions. Members of the public are encouraged to attend, ask questions, and provide comments related to the proposed storage of mixed low-level radioactive waste.

Members of the public requiring special access to participate in the meeting are encouraged to contact the DOE at least 72 hours prior to the meeting.

Proposed locations of mixed low-level waste storage prior to disposal in a RCRA-permitted disposal cell at the Nevada Test site Area 5 Radioactive Waste Management Complex.

Mixed low-level radioactive waste is low-level radioactive waste with a RCRA hazardous waste component. The hazardous component of the waste contains material that is toxic, corrosive, reactive, ignitable, or specifically identified by the U.S. Environmental Protection Agency (EPA) as "hazardous." Mixed low-level radioactive waste includes items such as building debris, soil, trash, equipment, tools and protective clothing.

You have received this announcement as a member of the U.S. Department of Energy National Nuclear Security Administration Nevada Site Office Environmental Management distribution list. If you would like to be removed from the list, please call 702-295-3521 or e-mail your request to envmgt@nv.doe.gov with the words "EM News Flash Remove" in the subject line. If you know anyone who would like to begin receiving these articles, please have them send a request to envmgt@nv.doe.gov with the words "EM News Flash Subscribe" in the subject line. You can also follow us on Facebook at NNSA Nevada Site Office.

safety ❖ performance ❖ cleanup ❖ closure

Other Outreach Mechanisms

- Websites
  - DOE – www.nv.energy.gov
  - CAB – www.ntscab.com
- Electronic Mailing List
  - Used to distribute meeting notices, press releases, etc.
  - More than 300 people and businesses
- DOE Public Reading Room
  - Nuclear Testing Archive, 755 E. Flamingo in Las Vegas
  - Nevada State Library and Archives, 100 Stewart St in Carson City

Environmental Management Site-Specific Advisory Board

Kelly Snyder
Deputy Designated Federal Officer
Community Advisory Board Orientation

What is the Environmental Management Site-Specific Advisory Board? (SSAB)

- Group of volunteers convened by the U.S. Department of Energy's (DOE's) Environmental Management (EM) Program to provide citizen review and feedback to DOE's EM activities throughout the country
- Largest Federally chartered advisory board in the country
- Made up of eight boards - including the Community Advisory Board (CAB) for Nevada Test Site Programs

Where Are the Eight Local SSAB Affiliates?

Why / How Was the SSAB Formed?

- National EM program formed in 1989
  - Assess / address conditions at 16 major locations known as the “nuclear weapons complex” (2.3 million acres of land and 120 million square feet of buildings)
  - Identified major challenges that would require comprehensive communication program with communities surrounding sites

Why / How Was the SSAB Formed?
(continued)

- 1993 National Policy Dialogue - develop recommendations to improve the process for federal facility cleanup decision-making
  - DOE, other Federal agencies, Tribal governments, Native American organizations, and local governments
  - Recommended that a SSAB be established
- 1994 – EM SSAB Charter approved
  - Requires renewal every two years

Advisory vs. Oversight

- Oversight – monitor progress toward project completion according to specified milestones that are often reflected in law and/or agreements
- Advisory – independently create recommendations that address work within the EM purview of concern and interest to the board and the public

The Community Advisory Board for Nevada Test Site Programs is an advisory board

Scope of the NTS CAB

- Environmental Restoration
  - Groundwater characterization
  - Surface soil contamination/remediation
  - Facility contamination/remediation
- Waste Management
  - Low-Level Waste disposal and transportation
- Environmental Management Budget

SSAB Operating Requirements

- Federal Advisory Committee Act
- SSAB Federal Charter
- DOE Standard Operating Policies and Procedures
- DOE Guidance
- NTS CAB Standard Operating Procedures

Documents available on the CAB website at www.nv.doe.gov/ntscab under *Procedures*

Community Advisory Board for Nevada Test Site Programs

Denise Rupp, CAB Administrator
Kelly Snyder, Designated Deputy Federal Officer
Community Advisory Board Orientation
May 25, 2020

Environmental Management
safety ❖ performance ❖ cleanup ❖ closure
www.em.doe.gov

Who Is the Community Advisory Board (CAB)?

- Members
  - Chair and Vice Chair
- Liaisons
- Staff

Board Members

- Members
  - Appointed by Department of Energy's (DOE) Assistant Secretary for Environmental Management (EM)
  - Serve two-year term which can be renewed by DOE up to three times (six year limit)
  - Strive for 15-20 members

Board Members
(continued)

- Member Responsibilities
  - Attend regular meetings and training
  - Review EM issues within CAB's purview
  - Submit timely recommendations

Chair and Vice Chair

- Chair and Vice Chair
  - Elected for one-year term beginning October 1
  - Support Board in balanced and unbiased manner
- Chair and Vice Chair Joint Responsibilities
  - Attend EM Site-Specific Advisory Board (SSAB) bi-annual meetings and participate in bimonthly EM SSAB conference calls

Chair and Vice Chair
(continued)

- Chair Responsibilities
  - Chair Full Board meetings
  - Certify Full Board minutes within 45 days
  - Represents the CAB during media opportunities
- Vice Chair Responsibilities
  - Serve as Chair in his absence

Liaisons

- Liaisons represent organizations
- Non-voting Board members
- Current Representation:
  - State of Nevada Division of Environmental Protection
  - Department of Energy, Environmental Management
  - Nye County
  - Clark County
  - U.S. National Park Service

Liaisons
(continued)

- Liaison Responsibilities
  - Communicate position of the entities they represent
  - Provide access to information pertinent to EM issues
  - Inform the Board of progress and activities pertinent to the Board's mission

Staff

- Designated Deputy Federal Officer (DDFO)
- Technical Advisor
- Administrator

Deputy Designated Federal Officer (DDFO)

Kelly Snyder

- Ensures the Board has opportunities for input
- Provides timely information to the Board relative to DOE and EM initiatives, decisions, processes
- Provides suggestions to the Board regarding EM activities on which its input would be useful

Deputy Designated Federal Officer (DDFO) (continued)

- Reviews Board input and ensures timely response
- Ensures that community and Board concerns related to EM are addressed
- Provides for adequate funding and staff support
- Attends all CAB meetings
- Approves meeting agenda and minutes
- Can adjourn meetings if it is in the public interest

Administrator

Denise Rupp

- Arranges/facilitates meetings; prepares written summaries
- Provides day-to-day communications
- Coordinates travel activities
- Maintains complete files of CAB activities
- Works with CAB to finalize/format written recommendations

Technical Support

Dr. Helen Neill

- Department of Environmental Studies, University of Nevada, Las Vegas
- Provides technical assistance to the Board
- Funded by a five-year grant from DOE

Standard Operating Procedures

- Attendance
  - Attendance is required at a minimum of 50% of regular meetings in any one-year period
  - To be considered “present,” must attend two-thirds of a meeting
- Conflict of Interest
  - Board members prohibited from participating as a CAB member in any matter in which they have financial interest
  - If aware of a conflict, Board members must refrain from discussions and recommendations

Standard Operating Procedures
(continued)

  - May not knowingly receive gifts or gratuities from persons having business with DOE EM, except if:
    - less than $20 ($50 total per year)
    - Motivated by personal friendship
    - Result of outside activities and not enhanced by Board membership
- Media
  - Only the Chair may represent the Board with the press/media unless appointed by the Chair

Standard Operating Procedures
(continued)

- Recommendations
  - Meetings are held to discuss information and perspectives and develop draft recommendations
  - Draft recommendation must be thoroughly reviewed and approved by Full Board
    - Minority Report can be included if consensus cannot be reached
  - Approved recommendation signed by the Chair and submitted to DOE within 15 days
  - Same process is used for EM SSAB recommendations

Standard Operating Procedures
(continued)

- Voting
  - Meeting requires a quorum (at least 51% of voting members) for decision making
  - Absentee voting is only allowed for changes to the Standard Operating Procedures

CAB Meetings

- The Board will meet as needed with length of meeting determined by agenda
- The DDFO, or appointed DOE representative, must be present at all CAB meetings
- Meetings follow agenda and conducted by the Chair with facilitation by the Administrator
- Voting is conducted according to Robert's Rules of Order

CAB Meetings
(continued)

- Time and Location
  - Full Board typically meets the second Wednesday of the odd-numbered months at 5 p.m. for two to three hours
  - Committees meet as needed (typically Monday through Thursday, day or early evening) to accomplish Work Plan tasks
  - Time and location must be accessible to the general public
  - While typically held in the Las Vegas area, meetings are also held in rural areas

CAB Meetings
(continued)

- Notices
  - 72-Hour Congressional Notice is required for all Full Board and committee meetings (prepared by the DDFO)
  - Federal Register Notice is required for all Full Board meetings (prepared by the CAB Administrator)
  - Members are sent notice of meeting with request for attendance response and draft agenda at least a week prior to meeting

CAB Meetings
(continued)

- Agendas
  - Agendas prepared by Chair, DDFO, and Administrator
  - Provided to members the week prior to the meeting
  - Posted to the website
  - If available, items for vote are included with the Full Board agenda for review prior to the meeting

CAB Meetings
(continued)

- Minutes
  - Prepared by Administrator
  - Provided to members and DDFO for review
  - Full Board minutes certified by Chair and DDFO and submitted to EM Headquarters within 45 days
  - Committee minutes reviewed by Chair and submitted to EM Headquarters within 30 days
  - Posted to the website

CAB Meetings
(continued)

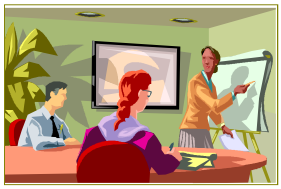
- Public Participation
  - Meetings are open to the public
  - A section of the meeting space is available for public seating
  - Public comment is included in the agenda for oral comments
  - Written comments are always accepted

CAB Meetings
(continued)

- Alternative meetings
  - On-line meetings have been pursued and DOE security firewall prohibits the software
- Refreshments
- Meetings at the Nevada Support Facility require:
  - Badging at the DOE Badge Office
  - Vehicle inspection at facility entry gate
  - No prohibited articles

Work Plan

- Must be submitted by CAB and approved by DOE prior to October 1, developed at September Full Board meeting
- Outlines all activities the Board will participate in during the fiscal year



- Ensures board members and DOE understand each others expectations

Work Plan
(continued)

- Items suggested by DOE and CAB members in accordance with guidance from EM Assistant Secretary
- CAB ranks items by priority and determines if a committee is needed to accomplish the item
- Work Plan activity cannot begin until DOE approval is received
- Modifications may be requested during the fiscal year with DOE approval

Committees

- Committees are developed each fiscal year (October through September) as dictated by the Work Plan
- Committee Chairs for the fiscal year are elected by the Committee members at the September Work Plan development meeting

Committees
(continued)

- FY2010 Committees:
  - Budget *(inactive)*
    - Review and prioritize EM sub-projects for the Federal budget process
  - Groundwater (UGTA)
    - Focuses on issues related to groundwater contamination, characterization, drilling and modeling at the Nevada Test Site

Committees
(continued)

- Industrial Sites
  - Focuses on issues related to decontaminating and disposing of obsolete buildings and facilities
- Membership
  - Responsible for recruiting new members
- Outreach *(inactive)*
  - Strives to increase public awareness of the CAB

Committees
(continued)

- Soils
  - Focuses on issues related to clean-up standards used to remediate surface soil contaminated by historic nuclear testing
- Transportation/Waste *(inactive)*
  - Focuses on issues related to transportation of hazardous and radioactive wastes and waste management disposal activities

Remaining FY 2010 Work Plan Tasks

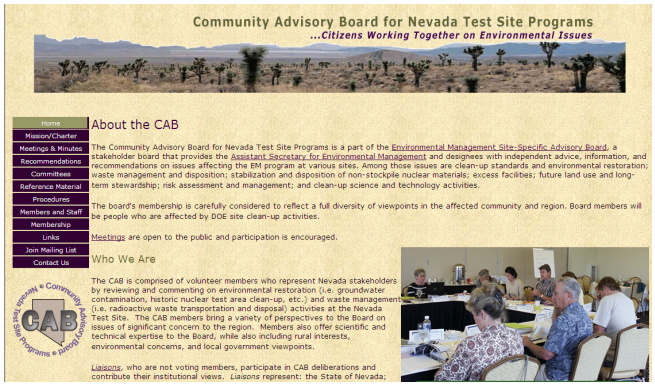
- Item 2
  - Excess train cars path forward (Industrial Sites Committee – *meeting date TBD*)
- Item 5
  - New UGTA strategy (UGTA Committee – *meeting scheduled for June 15*)
- Item 10
  - Cabriolet/Palanquin Unit Craters closure options (Soils Committee – awaiting data from DOE)

Remaining FY 2010 Work Plan Tasks
(continued)

- Item 11
  - Groundwater well completion reports (UGTA Committee – *awaiting reports from DOE*)
- Item 19
  - Student Liaison CAB positions (Membership Committee – *awaiting response*)

CAB Website

www.nv.energy.gov/ntscab



Administrative

- CAB office hours are Monday through Thursday, 7:30 a.m. to 4:30 p.m.
- Majority of CAB communication done vie e-mail NTSCAB@nv.doe.gov
- Report information changes regarding contact information and work status to the CAB office

Travel Overview

- Authorized Travel
  - CAB meeting notices sent via e-mail
  - CAB members *must* send a **"reply e-mail"** which will serve as your "Travel Request"
  - Members cannot receive reimbursement unless a Travel Request is submitted and DOE approval is given in advance of travel

Travel Overview
(continued)

- Traveler Information Form
  - One-time form is completed and returned to the CAB Office for processing
  - Establishes your account within the federal government travel system
  - Reimbursement is paid through direct deposit
  - No checks are generated or mailed
  - Emergency contact information is required

Travel Overview
(continued)

- CAB members must follow Federal Travel Guidelines
- CAB members responsible for payment of travel expenses with DOE reimbursement after travel completion
- Lodging and per diem reimbursement is dependent upon location and time of meeting

Travel Overview
(continued)

- Travel reimbursement is based on approved federal per diem rates for hotel and food/incidentals
  - Rates vary from city to city
  - Per diem is daily allowance for food and incidentals
  - Rates may change each fiscal year

Dates Las Vegas	Hotel	Full-Day Per Diem	Partial-Day Per Diem
January 1 – May 31	$118	$ 71	$ 53.25
June 1 – September 30	$109	$ 71	$ 53.25
October 1 – December 31	$109	$ 71	$ 53.25

Travel Overview
(continued)

- Mileage
  - Roundtrip mileage is always calculated from your *residence* to the *meeting location* and back
  - Mileage reimbursement is offered if meeting location is more than 30 miles from residence
  - Reimbursed at $0.50 per mile (*current rate*)

Travel Overview
(continued)

- Receipts
  - Email or fax (702-295-5300) all receipts to the CAB office
  - Do not submit receipts for food (this is covered by your per diem, if applicable)
  - Vouchers cannot be processed without receipts
- Payment
  - Made via direct deposit
  - Usually within one week of voucher submittal

Travel Overview
(continued)

- Nevada Travel
  - CAB members are responsible for own hotel reservations
  - Government room rate must be requested (per guidelines)

Travel Overview
(continued)

- Out-of-State Travel
  - All arrangements (air, hotel, transportation) for out-of-state CAB meetings are made by the CAB Office
  - Most cities have a government preferred airline and CAB members must travel via these carriers

Forms

- Basic Membership Information
- Traveler Information Form
- Direct Deposit
- Nevada Test Site Tour Form
- Photo Release Form