

Nevada Low Level Waste Priorities

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Nevada Site Specific Advisory Board

Role of the NV Division of Environmental Protection at the Nevada National Security Site

Environmental Restoration



- Soils
- Underground Test Areas
- Industrial Sites

Waste Management



- Solid Waste Disposal Act (RCRA)
- Agreement in Principle

Role of NNSA in the DOE Complex (NNSA and EM)

Cold War Legacy

Current Missions:

- National Security
- Low Level Waste Disposal

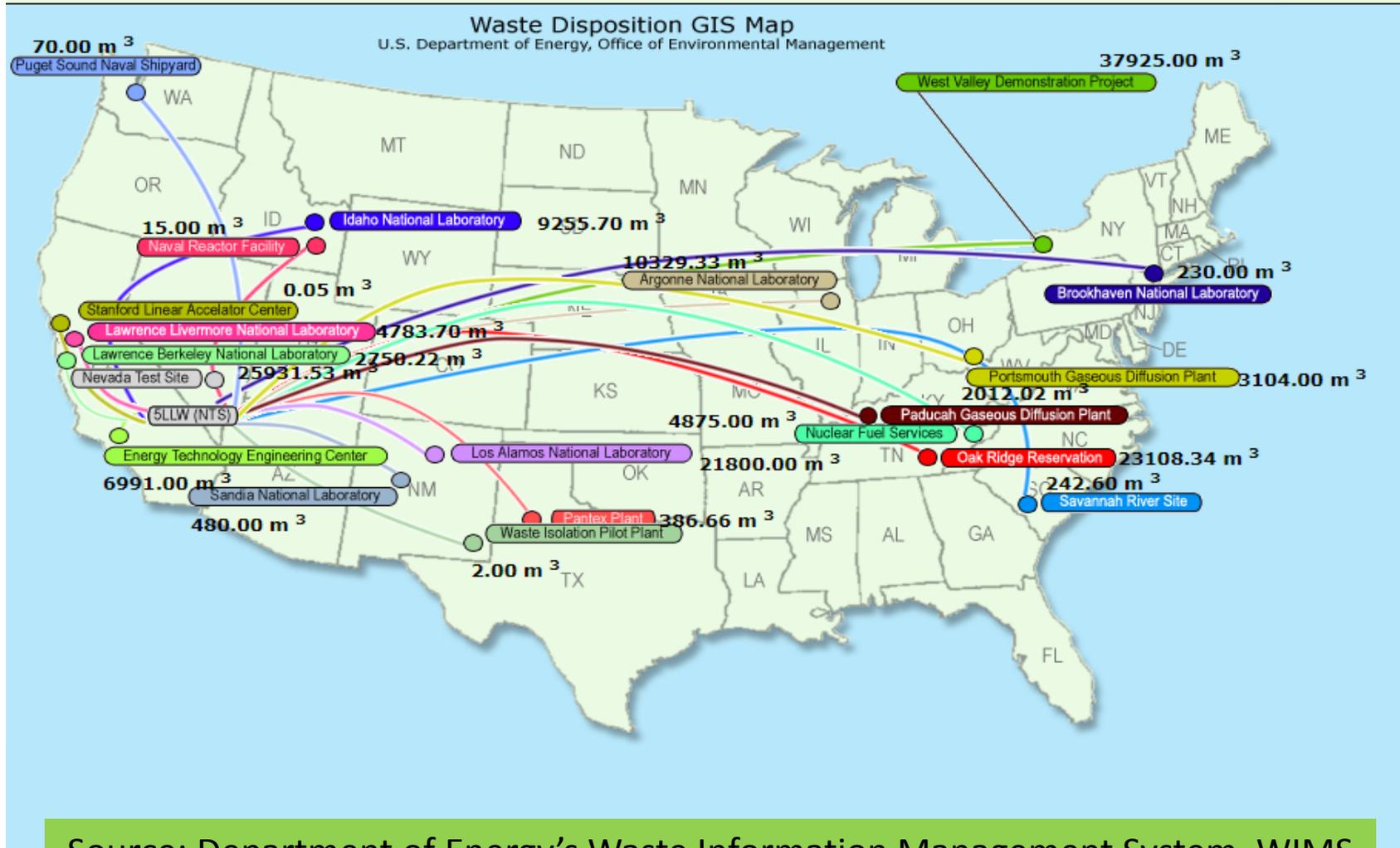
Waste Disposal Option for DOE Generator Sites

Nevada / DOE Collaboration – MOU and
Working Group

DOE Complex-Wide LLW/MLLW Waste Disposal

Year	Percentage Disposed On-Site at Generator Sites	Percentage Disposed at Commercial Sites	Percentage Disposed at NNSS
FY 14 Actual	92	2	5
FY 15 Actual	90	3	7
FY 16 Actual	93	2.5	4
FY17 Projected	78	8	11
FY18 Projected	88	2	5.5

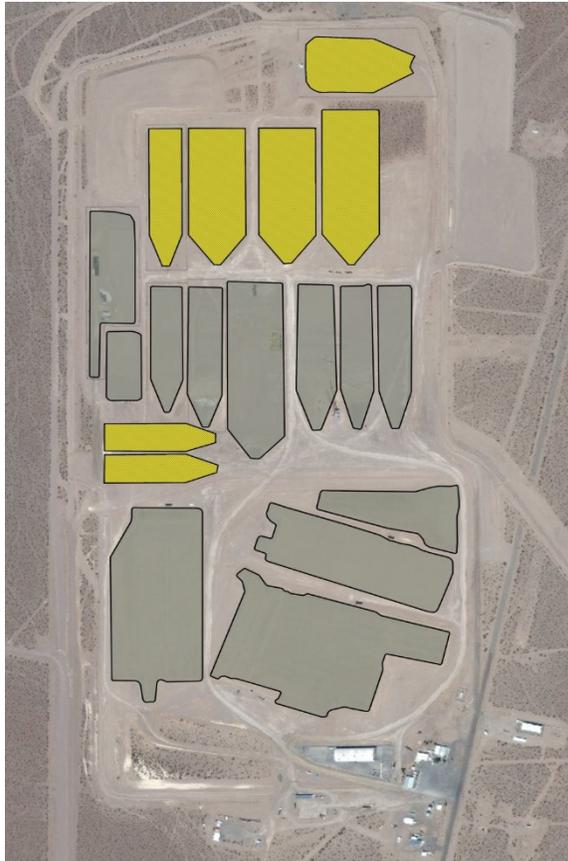
DOE Planning Estimates Waste From All Sites to NNSA Area 5 FY17 to FY21



26 Approved
Generators
in 14 States

Source: Department of Energy's Waste Information Management System, WIMS

Area 5 Radioactive Waste Management Complex (RWMC) at the NNSS



Collaborative Interaction

Reduce Risk to Nevada

Transparency

Predictability



State of Nevada's Priorities in Regards to the Area 5 RWMC at the NNSS

Disposal Predictability

Waste Forecasting

Waste Classification

Waste Verification

Continued Planning and Outreach



Waste Disposal Predictability and Forecasting – Successful Example

Nevada's Goals Regarding Sealed Sources – A Higher Activity Waste Stream

- Exhaust use of or develop alternate disposal sites
- Long term plan to reduce reliance on NNSD disposal



Difficulties Meeting Goals with Previous Process

- Collective policy and technical resources focused on individual waste streams without context of overall inventory or expected future
- Limited incentives for sealed source waste generators to reduce generation (Low-Level Radioactive Waste Forum, Inc. March 2014 Disused Sources Report)

NNSA Sealed Source Planning – White Paper

A Plan for Meeting Nevada and DOE's Goals

- **Expanded Commercial Disposal Options**
 - Greater than Class C EIS
 - WCS Texas petitioning to accept additional wastes
 - NRC revision to generic Co Cs disposal limits (Richland, WA and TX)
- **Incentives to reduce waste generation**
 - NRC financial assurance rulemaking
 - Support alternative technologies (NNSA Cs irradiator replacement program)
- **Inventory of Sealed Sources**
- **Estimated decline in reliance on NNSA for sealed source disposal**
- **Update plan on 6 month intervals (next September 2017)**
- **NNSA developed Sealed Source Communication Plan**



Current Waste Classification – Key Characteristic Variation in LLRW Profiles

October 2016 National Academy of Sciences Workshop on LLW

CHARACTERISTIC	Radionuclide Half-Life (years)	Ratio of Waste Isotope Activity Level to WAC Thresholds (unitless)	Plutonium Equivalent Grams (g/m ³)
NNSS LLRW RANGE	Low 5 years	Low one billionth	Low 2.1 Pe-G
	High 700 million years	High 2 million times	High 3 million Pe-G

Takeaways

- Existing definition of LLRW does not distinguish between these wastes
- Need a more defined and transparent process for determining if and how these waste streams should be managed differently

Improving Waste Verification

CURRENT PRACTICE

- Only at Generator Sites
- Heavy Process Knowledge
- Limited Real Time Radiography
- 2003 DRI LLW Truck Study

NEEDED ENHANCEMENTS

- Capability at the NNSS
- More Analytical Verification
- Routine & Random Real Time Radiography
- Updated Transportation Study

Continued Planning and Outreach

State Tribal Government Working Group & NGA Federal Facilities Task Force



Nevada Site-Specific Advisory Board



Tabletop Exercise



DOE's Groundwater Open House

Categories	Stakeholder Group
DOE/NNSA	Working Group
	EM HQ
	Nevada Field Office – EM & NNSA
	Every Generator Site
State	BFF Internal Staff
	Agency for Nuclear Projects
Local NV Communities	NSSAB
	Nye County
	Clark County
	City of Las Vegas
	Pahrump
	Outlying Communities
	Local Tribes
National Associations	ECOS-directors
	ECOS/States/EPA Dialogue
	FETF
	STGWG - Tribes
	NAAG, ECA, NCSL
	LLW Stakeholders Forum
	Media
	General Public

Summary & Conclusions

NV Low Level Waste Priorities

Maintain and constantly improve productive working relationship between regulator, local DOE office, DOE HQ, and NV stakeholders

Waste Management

- Regulatory Role for Mixed Low-Level Waste
- Oversight Role by Agreement-in-Principle for Low-Level Waste
- Yucca Mountain Project

Role of NNSS in DOE Complex

- National/nuclear security
- LLW Disposal
- Transportation

For Nevada:

- Waste Forecasting - Transparency & Predictability of Waste Streams to Nevada
- Waste Classification
- Waste Verification
- Continued Planning and Outreach