



U.S. DEPARTMENT OF
ENERGY

U-233 Disposition Program

*Presented to
Nevada Site Specific Advisory Board*

By
John W. Krueger
Federal Project Director
DOE Oak Ridge Operations

January 18, 2012



EM *Environmental Management*

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About Uranium-233...

- U-233 is created in reactors by irradiating Thorium-232
- Originally used in nuclear energy research on the thorium fuel cycle
 - Th-232 is “stable” and ubiquitous
- Also a fissile material requiring protection from theft/diversion
- U-233 is an alpha emitter
 - Decay chain includes Th-229, used for medical isotope production
- U-232 is always present as a contaminant
 - Thallium-208 daughter is a high energy gamma emitter

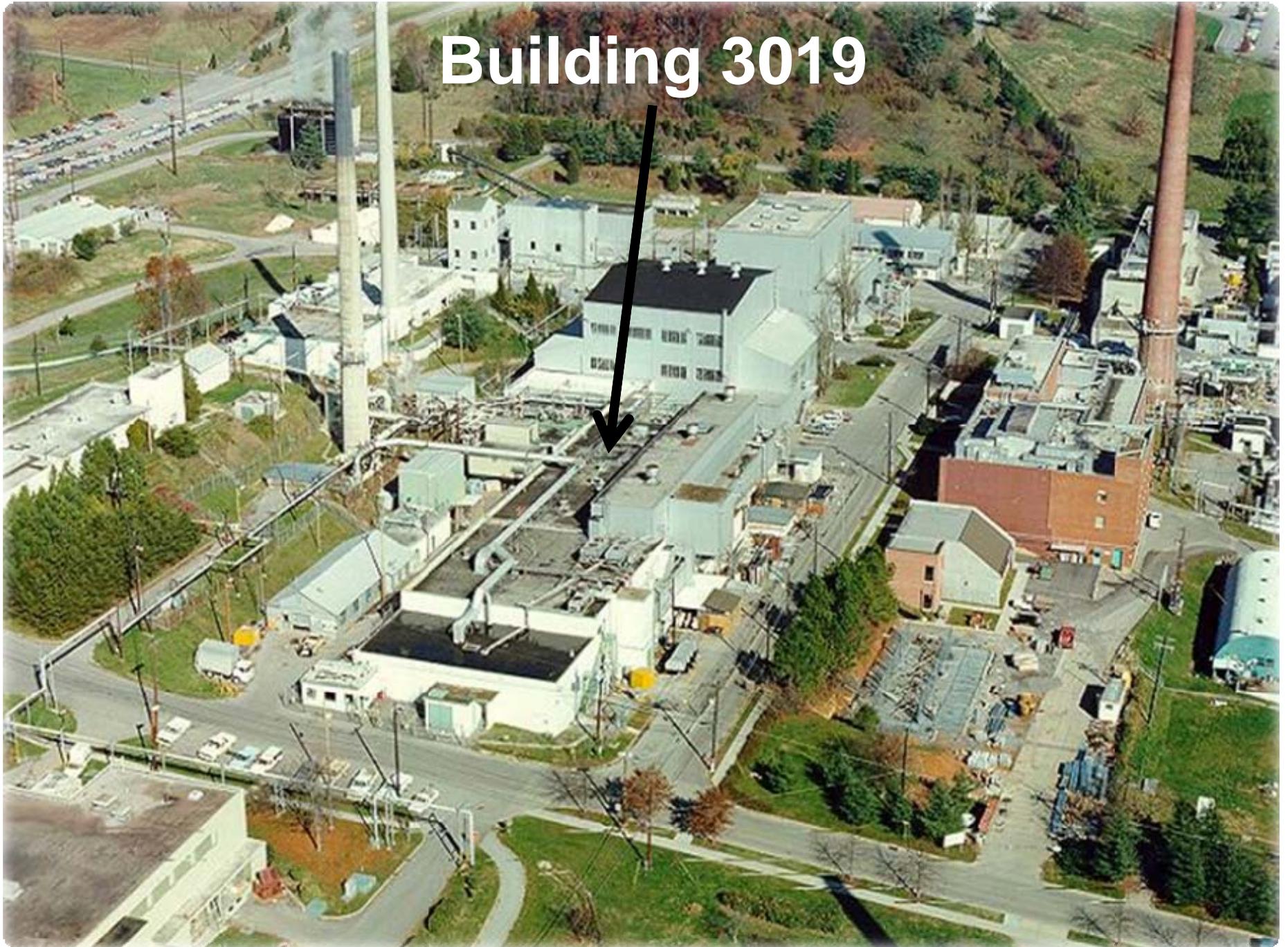


About Building 3019...

- Constructed in 1943 adjacent to the historic graphite reactor
 - Consists of seven hot cells surrounded by control rooms, laboratory space, and offices
- Utilized as a pilot plant for demonstration of extraction processes
- World's first gram quantities of plutonium isolated in Bldg 3019
- The Atomic Energy Commission consolidated U-233 into Building 3019 and created a “national repository” beginning in 1962
- Building 3019 is now the oldest operating nuclear facility in the world (currently used only for U-233 storage)



Building 3019

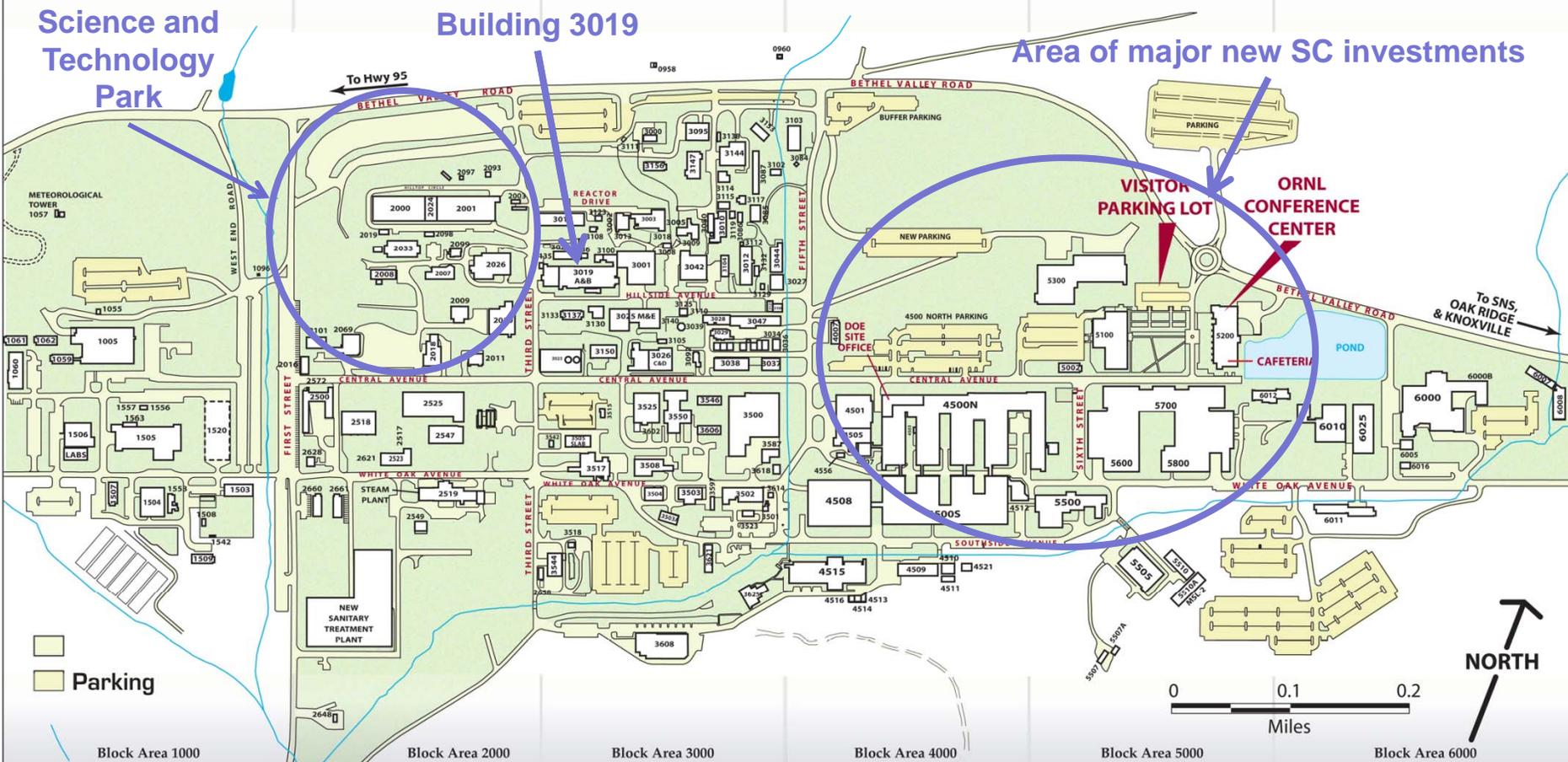


Mission Drivers

- **Mission:** Safely and efficiently dispose of the U-233 inventory in Building 3019
- Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 97-1
 - Concern about safety of long-term storage in old nuclear facilities
- Security
 - Non-enduring facility status enables temporary exemption from the most recent graded safeguards policy
- Support to the Office of Science (SC) mission at Oak Ridge National Laboratory (ORNL)
 - Threat removal
 - Re-development of the main Lab area into an open campus



Oak Ridge National Laboratory Main Campus



1005 Laboratory for Comparative and Functional Genomics
 1503 Emergency Operations Center
 1505 Environmental Sciences
 1520 Joint Institute for Biological Sciences (under construction)
 2518 Fire Station
 3001 Graphite Reactor
 4500N/4500S Chemical and Material Sciences Facility

4508 Metals and Ceramics Facility
 4512 Laboratory Shift Superintendent Office
 4515 High Temperature Materials Laboratory
 5100 National Institute for Computational Sciences/Oak Ridge Center for Advanced Studies
 5200 Research Support Center - Visitor Center/Conference Center/Cafeteria
 5300 Multipurpose Research Facility (under construction)
 5600 Computational Sciences

5700 Research Office Building
 5800 Engineering Technology Facility
 6000 Holifield Radioactive Ion Beam Facility
 6008 Joint Institute for Heavy Ion Research

ORNL 2007-G00360A/asg



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Inventory Complexities

- Building 3019 U-233 Inventory Properties
 - 1,098 canisters stored within tube vaults in heavily shielded hot cells inside Building 3019 at Oak Ridge National Laboratory
 - Heterogeneous inventory can be grouped into six categories:
 - Consolidated Edison Uranium Solidification Project (CEUSP) Material
 - Molten Salt Reactor Experiment (MSRE) Traps
 - Oxide Powders
 - Metals
 - Zero Power Reactor (ZPR) Plates
 - Miscellaneous
 - Doses of 1-300 R/hr
 - U-232 contribution



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Project Background

- Contract for disposition was awarded by DOE Office of Nuclear Energy (NE) to Isotek, LLC in 2003
- Started out as a medical isotope extraction project
- By 2007, the scope had evolved to:
 - Design and construction of modifications to Building 3019 (a Category 2 Nuclear Facility, Category 1 Security) and a whole new annex
 - Dissolution and downblending of the U-233 inventory with depleted uranyl nitrate to reduce the attractiveness level and eliminate the potential for nuclear criticality
 - Conversion of the downblended material to magnesium diuranate and production of a final waste form compliant with the Nevada National Security Site (NNSS) waste acceptance criteria (WAC)
 - Shipment for disposal
- Complicating factors caused design delays and cost growth



Alternatives Analysis

“I want to express my full support of another rigorous look at...alternatives, and an evaluation of any new ideas which may emerge...for purposes of determining whether changed circumstances could render a different technical solution more attractive in today’s context.”

- Deputy Secretary Poneman

- Phase I Alternatives Analysis report favored a combination of direct disposition and co-processing
 - Transfer components desired by other DOE programs
 - **Direct dispose of the CEUSP material**
 - Co-process remaining inventory with other ORNL wastes
 - Final processing approach requires a Phase II analysis



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Phase I Report Summary

- Direct disposition:
 - Eliminates 52% of canister inventory
 - 77% of total Uranium and 85% of U-232 isotope
 - Removal of a significant fraction of the U-**232** via CEUSP disposal enables more efficient processing of the remainder
 - Processing of CEUSP would provide no substantive benefit
- Co-processing remaining inventory:
 - Reduces processing time
 - Eliminates transportation
 - Obviates annex construction
- Safer and more efficient than the existing baseline:
 - Reduces waste volume and transportation
 - Reduces worker exposure and eliminates worst accident scenarios
 - Allows DOE EM to address other important issues sooner





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CEUSP Disposal

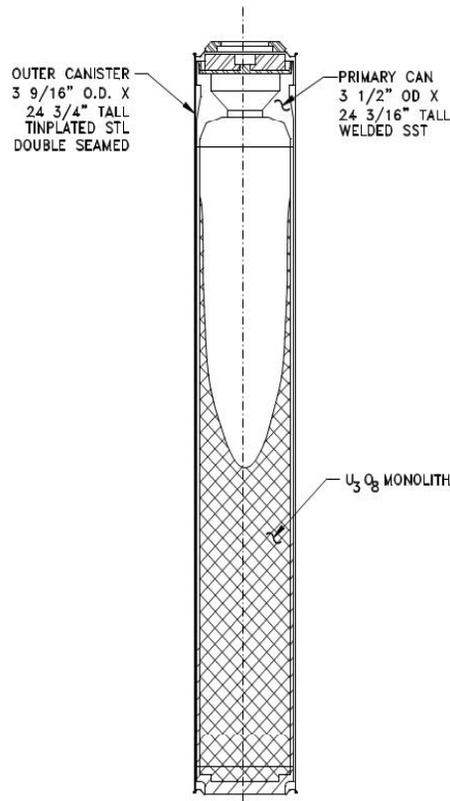


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CEUSP Characteristics



(ALL DIMENSIONS ARE NOMINAL)

B.8 CEUSP PACKAGE ASSEMBLY

- Uranyl nitrate transferred from West Valley to ORNL in 1969 and stored as a liquid for nearly 20 years
 - Gadolinium and cadmium added for neutron absorption
- Solution was denitrified at high temp in small batches (within the CEUSP canisters) in 1986
- Yielded 403 ceramic-like U₃O₈ monoliths, bonded to inside of containers
 - 2.6 kg total U each (average)
 - 76% ²³⁵U and 10% ²³³U



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CEUSP Characteristics

- CEUSP is not a hazardous waste
 - Cadmium is serving its intended purpose as a neutron absorber
 - Provides “defense-in-depth” against accidental criticality
 - State of TN agrees that CEUSP is not a hazardous waste
 - Contains chromium only in a trivalent (insoluble) oxidation state due to high temperature processing (i.e., not RCRA-regulated hexavalent Cr)
 - Isotek report thoroughly analyzes Cr chemistry at high temperatures
- CEUSP is not a transuranic (TRU) waste
- High radiation field
 - 126 ppm ^{232}U ; 300 R/hr on contact
- Thorough process knowledge



Waste Acceptance

- Expected to be certifiable against all NNSS waste acceptance criteria (WAC)
 - Exceedance of package-based fissile gram limitations and “action levels” for uranium isotopes was discussed during the Phase I analysis in cooperation with NNSS
 - NNSS waste acceptance and landfill performance experts remain engaged
 - To address fissile gram limitations: Conceptual CEUSP disposal configuration was shown to be criticality-safe with minimal controls; Final nuclear criticality safety evaluation (NCSE) will still be needed
 - To address U isotope “action levels”: NNSS performed a preliminary analysis which concluded that disposal of the material would not challenge the boundaries of their landfill performance assessment
- Waste profile still needs to be developed, submitted and approved



Preliminary Transport/Disposal Model

- Planning for CEUSP shipments is still in the early stages; proposed shipments will not start until mid-FY13
- Preliminary disposal concept developed with NNSS: Dispose as a low-level waste, within a slit trench in the bottom of the cell
 - Disposal sleeve would be remotely lifted out of cask by crane and placed horizontally in the slit trench, then covered (58 trenches total)
 - Slit trench would help with “as low as reasonably achievable” (ALARA) considerations for worker protection
 - Other low-level waste would be piled on top of completed trenches

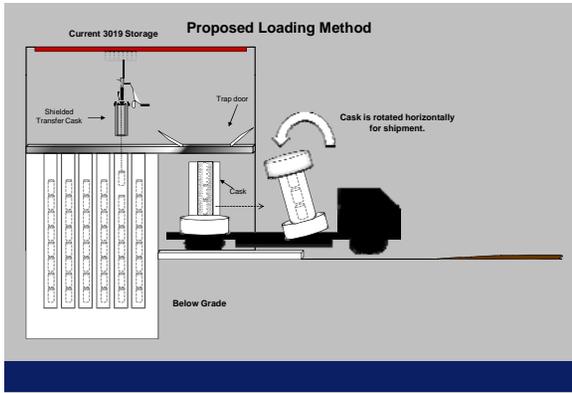


Transport/Disposal Model (cont.)

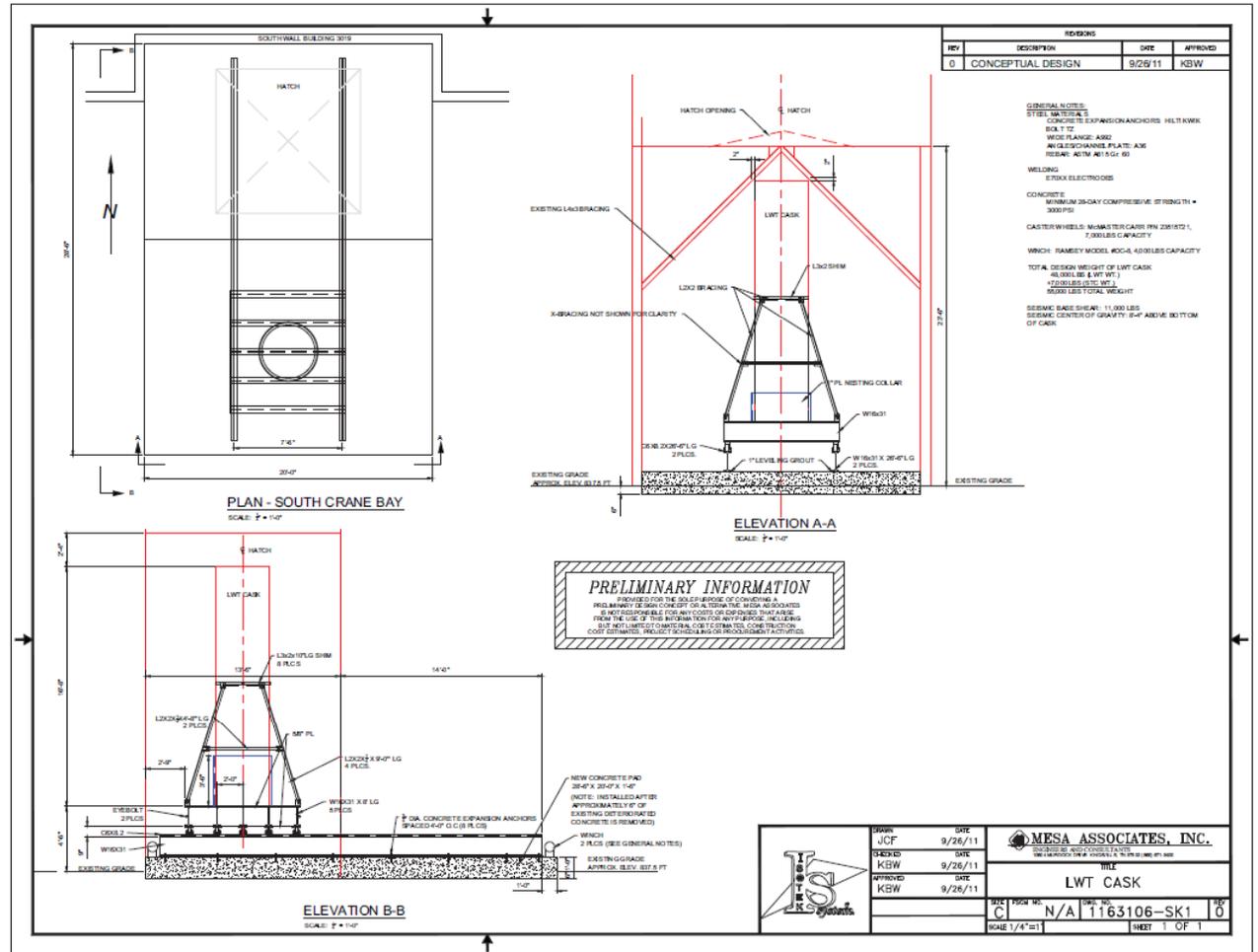
- Working with NAC International to modify the “Legal Weight Truck” (LWT) Type B shipping container for CEUSP use
 - The LWT cask is 19’ long (including impact limiters), weighing 48K lbs empty; shielding is 6” lead (Pb) equivalent
 - NAC will design/fab a new internal reusable liner as a single sleeve that will hold a disposable lifting basket (which NAC will also design/fab) containing 7 CEUSP canisters
 - NAC will modify the LWT Safety Analysis Report for Packaging (SARP) for U-233 content and sleeve re-design
- Preliminary, summary-level schedule for LWT SARP revision and subsequent CEUSP shipment shows:
 - NAC first draft SARP revision complete by the end of April, 2012
 - 6-month SARP review/approval process
 - CEUSP shipments to NNSS from April 2013 through September 2014
 - Duration based on approximately 58 cask shipments, one per week to NNSS



Conceptual Loading Process



Phase I sketch has advanced to conceptual design



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Transportation Safety

- Per agreement with the State of NV for low-level waste (LLW) shipments, the route will avoid (by contract):
 - The I-15/U.S.-95 interchange within Las Vegas (the Spaghetti Bowl)
 - Hoover Dam (including the O'Callaghan-Tillman Bridge)
- Security en route: TBD
- Dose rate to any member of the public will be significantly less than 1 millirem/hr (LWT cask will be ~5 mR/hr on contact)
 - Based on an **anticipated** 2-meter dose rate from an LWT cask containing 7 CEUSP canisters
 - Maximally exposed member of the public would likely receive a total dose that is less than a few hours worth of exposure to naturally-occurring, ambient (background) radiation

This assertion will be confirmed through actual dose modeling



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The LWT Cask on the Road...



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Questions?



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Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

September 15, 2011

John Eschenberg
Assistant Manager for Environmental Management
DOE-Oak Ridge Office
P.O. Box 2001, EM-90
Oak Ridge, TN 37831

Dear Mr. Eschenberg:

Recommendation 203: Recommendation on the Uranium-233 Project Re-Examination

At our September 14, 2011, meeting the Oak Ridge Site Specific Advisory Board approved the enclosed recommendation regarding the Uranium-233 Project Re-Examination.

The Board recommends that the Department of Energy take the following actions regarding the Uranium-233 Project at Oak Ridge National Laboratory:

- The Alternatives Analysis for the project should be implemented
- Dissolving of uranium-233 should be done in a safe manner to prevent inadvertent criticality
- Supplemental funding for the project in addition to the normal Oak Ridge Environmental Management Budget should be provided by DOE
- DOE should hold a summit meeting regarding the removal of uranium-233 from Oak Ridge National Laboratory involving people who can make decisions regarding future uses of uranium-233, downblending, safety, and security.

Please see the enclosed recommendation for complete details.

We look forward to receiving your response to this recommendation by December 14, 2011.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ron Murphree'.

Ron Murphree, Chair, PE, CPE

rm/rsg

Enclosure

Recommendation: Recommendation on the Uranium-233 Project Re-Examination

cc/enc:

Dave Adler, DOE-ORO

Cate Alexander, DOE-HQ

Fred Butterfield, DOE-HQ

Pat Halsey, DOE-ORO

Connie Jones, EPA Region 4

John Krueger, DOE-ORO

Local Oversight Committee

Myron Iwanski, Anderson County Mayor

Melissa Nielson, DOE-HQ

John Owsley, TDEC

Mark Watson, Oak Ridge City Manager

Ron Woody, Roane County Executive

File 140.1



Oak Ridge Site Specific Advisory Board Recommendation 203: Recommendation on the U-233 Project Re-Examination

Background

The Oak Ridge Site Specific Advisory Board (ORSSAB) was briefed on the Uranium-233 Disposition Project Update by Mr. John Krueger on March 9, 2011. The Alternatives Analysis has dramatically reduced the scope of the project, especially the need for dissolution of U-233 at Building 3019 at Oak Ridge National Laboratory (ORNL). The reduction in scope has greatly reduced the projected cost and reduced the risk of disruption of ongoing mission activities ORNL through accidents.

The Board believes that the Alternatives Analysis represents innovative and creative problem solving that is most welcome.

Discussion

The Alternatives Analysis has greatly reduced, but not removed, the need for dissolution of some of the U-233 material in Building 3019. The handling, and in particular, the dissolution, of this material within ORNL presents a risk of severely disrupting activities at ORNL. While the Alternatives Analysis shows that this risk can be reduced, it apparently did not identify alternatives that could eliminate the risk.

The ORSSAB is, and has long been, concerned over the funding of this project. While the Alternatives Analysis has reduced the estimated cost, it is still comparable to the Oak Ridge Environmental Management annual budget.

The ORSSAB has repeatedly recommended that additional funding be provided to support this task [ORSSAB Recommendation 156 (13 April 2007), ORSSAB recommendation 178 (9 April 2009), and in our annual review of the FY 2010, 2011, and 2012 budgets].

The Board appreciates the Department of Energy (DOE) Deputy Secretary and the Assistant Secretary for Environmental Management's (EM-1) recognition of the importance of the Uranium-233 Disposition Project and their support of completion of the project. Current efforts to redefine the technical project approach and reestablish both the technical and fiscal baseline are applauded. Concurrently, EM-1 has launched an aggressive effort at footprint reduction for the DOE Complex. The addition of long overdue funding for the Uranium-233 Disposition Project as incremental funding above baseline to the Oak Ridge Office-EM base budget will demonstrate the Deputy Secretary and EM-1's commitment to completion of the project and the footprint reduction goals of the Department.

The Board also recognizes that completion of this project is necessary before other remediation can take place to finish the cleanup of the ORNL central campus, and thus should be an appropriately high priority.

Prioritization of this project should include the high cost of maintaining the U-233 in a safe and secure condition.

Recommendation

The Oak Ridge Site Specific Advisory Board recommends that DOE take the following actions regarding the removal of U-233 from Building 3019:

- The Board believes that the Alternatives Analysis represents innovative and creative problem solving that is most welcome and recommends that the approach outlined be implemented, to mitigate the continuing high cost of maintenance and to allow completion of the cleanup of the ORNL central campus.
- In order to assure that the work is performed safely, assure that any dissolving of U-233 in Building 3019 be done safely to prevent inadvertent criticality.
- The Board recommends that supplemental funding for this project in addition to the normal Oak Ridge Environmental Management budget be provided by DOE to assure that environmental cleanup activities will not be disrupted.

The Board recommends that DOE hold a summit meeting on the removal of U-233 from ORNL. Attendees should include the people who can make decisions regarding future uses of U-233, downblending, safety, and physical security. Others involved could include stakeholders such as DOE Congressional liaisons, local county and city officials, regulators, members of the Tennessee congressional delegation and/or staff, DOE budget administrators, and any other parties that can contribute to the speedy, safe and cost effective removal of the U-233 from ORNL.

Industrial Sites FY 2014 Outlook



Kevin Cabble
Federal Sub-Project Director
Briefing to Nevada Site Specific Advisory Board (NSSAB)
January 18, 2012



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Baseline Planned Cost

- FY 2013 \$0.5 M
- FY 2014 \$0.5 M



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Planned Activities – FY 2014

- Surveillance and maintenance at the Nevada National Security Site (NNSS) Area 25 Engine Maintenance Assembly and Disassembly (EMAD) Facility
- Post-closure monitoring at the NNSS and at the TTR



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FY 2014 – *What if...*

Industrial Sites received a 25% decrease in funding?

- Inspections are required to meet minimum regulatory regulations
- Negotiate with State of Nevada Division of Environmental Protection to do less surveillance, monitoring and post-closure inspections at the NNSS and TTR



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FY 2014 – *What if...*

Industrial Sites received a 25% increase in funding?

- Accelerate pre-field work for the remediation and demolition of CAU 114, Area 25 EMAD Facility



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Underground Test Area (UGTA) FY 2014 Outlook



Bill Wilborn
Federal Sub-Project Director
Briefing to Nevada Site Specific Advisory Board (NSSAB)
January 18, 2012



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Baseline Planned Cost

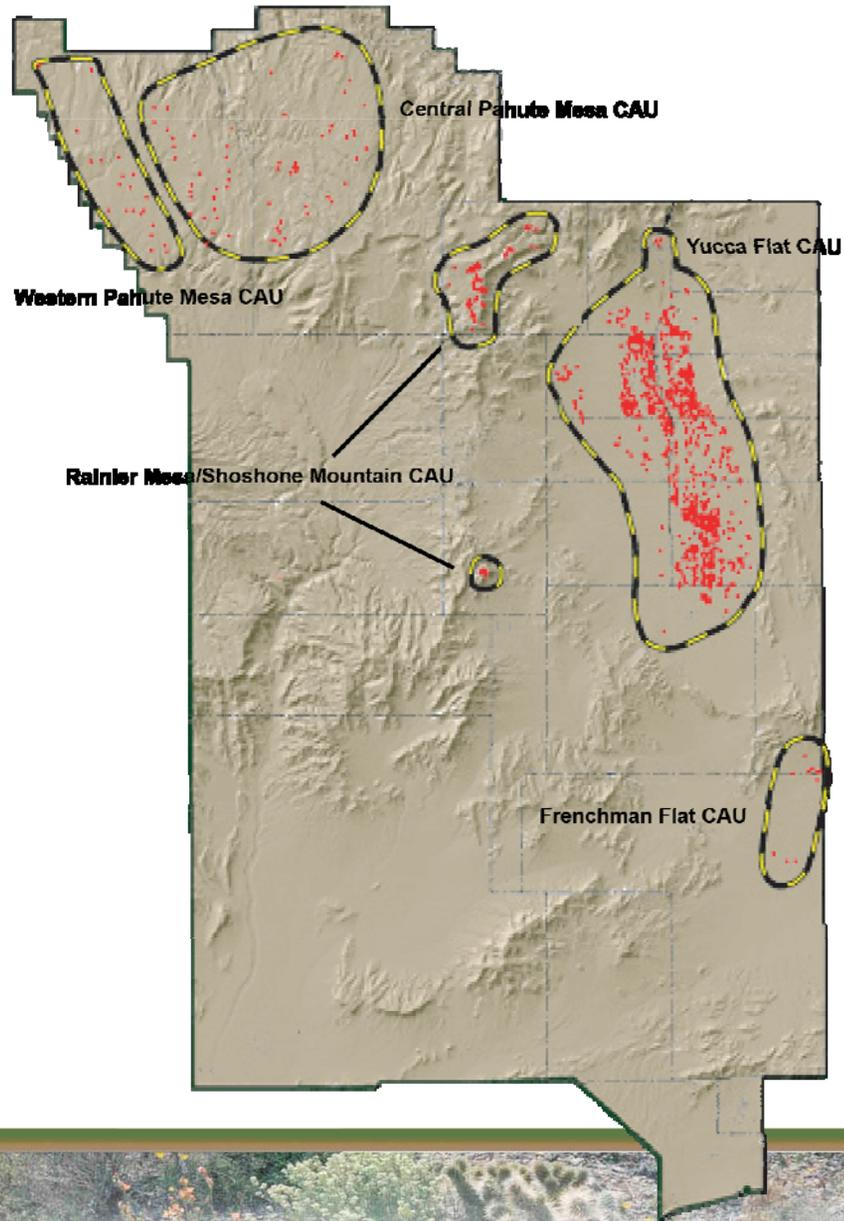
- FY 2013 \$31.5 M
- FY2014 \$27.9 M



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UGTA Corrective Action Units



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Planned Activities – FY 2014

- Yucca Flat
 - Acquire State of Nevada Division of Environmental Protection (NDEP) acceptance of Flow and Transport Model
 - Complete Peer Review of characterization work
 - Complete draft Corrective Action Decision Document/Corrective Action Plan document
- Central and Western Pahute Mesa
 - Complete analysis of well development and testing
 - Begin aquifer testing



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Planned Activities – FY 2014

(continued)

- Frenchman Flat
 - Complete model-evaluation report
 - Begin drafting Closure Report
- Rainier Mesa
 - Evaluate model and data needs from Flow and Transport Model with NDEP



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FY 2014 – *What if...*

UGTA received a 25% decrease in funding?

- Reduce data collection activities
- Reduce Corrective Action Unit modeling



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FY 2014 – *What if...*

UGTA received a 25% increase in funding?

- Accelerate data collection activities
- Accelerate Corrective Action Unit modeling activities



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Soils FY 2014 Outlook



Kevin Cabble
Federal Sub-Project Director
Briefing to Nevada Site Specific Advisory Board (NSSAB)
January 18, 2012



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Baseline Planned Cost

- FY 2013 \$6.5 M
- FY 2014 \$7.4 M



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Planned Activities – FY 2014

- Conduct fire monitoring and soil erosion studies
- Conduct Air Monitoring at Tonopah Test Range, Project 57, and Timber Mountain
- Complete the Closure Report (CR) for
 - CAU 411, Double Tracks
 - CAU 412, Clean Slates 1
 - CAU 366, Plutonium Valley
- Complete the Corrective Action Plans (CAP) for:
 - CAU 105, Area 2 Yucca Flat Atmospheric Test Site
 - CAU 569, Area 3 Yucca Flat Atmospheric Test Sites



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Planned Activities – FY 2014

(continued)

- Complete the Corrective Action Decision Documents (CADD) for:
 - CAU 541, Small Boy
 - CAU 571, Area 9 Yucca Flat Plutonium Dispersion Sites
 - CAU 550, Smoky Contamination Area
- Complete the Corrective Action Investigation Plans (CAIP) for:
 - CAU 567, Miscellaneous Soils Sites
 - CAU 568, Area 3 Yucca Flat Plutonium Dispersion Sites



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FY 2014 – *What if...*

the Soils activities received a 25% decrease in funding?

- Postpone CR for:
 - CAU 411, Double Tracks
 - CAU 412, Clean Slates 1
- Postpone CAP for:
 - CAU 567, Miscellaneous Soils Sites
 - CAU 568, Area 3 Yucca Flat Plutonium Dispersion Sites
- Postpone CADD for CAU 541, Small Boy



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FY 2014 – *What if...*

the Soils activities received a 25% increase in funding?

- Accelerate CAIP for:
 - CAU 413, Clean Slate II Plutonium Dispersion
 - CAU 414, Clean Slates III Plutonium Dispersion
 - CAU 415, Project 57



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Low-Level Waste Activities FY 2014 Outlook



Jhon Carilli
Federal Sub-Project Director
Briefing to Nevada Site Specific Advisory Board (NSSAB)
January 18, 2012



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Baseline Planned Cost

	FY 2013	FY 2014
EM Funding	\$13.4 M	\$16.6 M
Other Funding Sources	\$ 6.4 M	\$ 6.5 M
Total LLW Funding	\$19.8 M	\$23.1 M



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Planned Activities – FY 2014

- Safely dispose U.S. Department of Energy (DOE) low-level waste (LLW)
 - LLW Forecast = 843,071 ft³
 - MLLW Forecast = 245,798 ft³ (included in LLW total)
- Continue Radioactive Waste Acceptance Program facility evaluations of generators per the Nevada National Security Site Waste Acceptance Criteria
- Continue environmental monitoring activities at the Area 5 Radioactive Waste Management Complex (RWMC)
- Construct new low-level waste cell near Cell 20
- Maintain Performance Assessment and Composite Analysis to dispose waste



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FY 2014 – *What if...*

the LLW activities receive a 25% decrease in funding?

- Reduce staffing and disposal activities
- Delay construction of new low-level waste cell near Cell 20
- Delay new equipment purchases, including an earth mover and water truck, and/or facility upgrades



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FY 2014 – *What if...*

the LLW activities received a 25% increase in funding?

- Plan, design, and construct a flood protection berm around the western half of the Area 5 RWMC and/or
- Re-skin Transuranic (TRU) Pad cover
- Plan, design, and construct closure cap on operationally closed disposal cells in the expanded area of the Area 5 RWMC



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March 17, 2011

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: Nevada Site Specific Advisory Board (NSSAB) Recommendations
for Fiscal Year (FY) 2013 Budget Prioritizations

Dear Mr. Wade:

The NSSAB 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 2013 budget submittal.

As in previous years, the Board reviewed and prioritized four EM technical sub-projects and continues to place the highest priority on the Underground Test Area (UGTA) sub-project. This ranking reflects our commitment to working with EM to ensure budget dollars are available in support of groundwater issues at the Nevada National Security Site.

Following is the NSSAB's recommended FY 2013 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. UGTA

- Validate flow models
- Supplemented by additional drilling and data collection
- Highest potential impact on the public, particularly off site rural communities

2. 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
- Progress towards mixed low-level waste treatment facility

3. Soils

- Continue momentum of Corrective Action Units closures
- Funds are necessary to work toward agreement with the Air Force
- Additional funds would allow for accelerated clean up

4. Industrial Sites

- Project is essentially complete except for Engine Maintenance Assembly and Disassembly facility scheduled for 2017
- Until 2017, programs are at minimum level for monitoring and inspection
- Commitments to the State of Nevada Division of Environmental Protection cannot be met with any additional funding reductions

Thank you for the opportunity to participate in the annual budget prioritization and for the assistance provided by the EM staff. The federal staff took the time to meet with the NSSAB and provided detailed information. We sincerely appreciate this support and look forward to your response regarding this year's budget submittal.

Sincerely,



Department of Energy

Washington, DC 20585

December 12, 2011

Dr. Walter Wegst, Chair
Nevada Site Specific Advisory Board
Navaro, Inc.
232 Energy Way, M/S 505
North Las Vegas, Nevada 89030

Dear Dr. Wegst:

Thank you for your September 19, 2011, letter that applauds the Department of Energy's (DOE) Environmental Management (EM) cleanup work and recommends the identification of "unique assets" for retention with community input into those decisions. Although no specific assets were mentioned in the recommendation, I hope that you have made your concerns known to your local EM Site-Specific Advisory Board (EM SSAB) contacts and site managers.

EM does evaluate potential reuse of assets as it plans its cleanup efforts. Decisions regarding assets for retention are based on several considerations including the potential for future use of the assets, potential value for reuse, and the cost of maintaining the assets in safe condition. As always, the EM budget must be managed and allocated toward mission goals of compliance, cleanup, and closure of its mission sites. Preservation activities are considered within this context.

Community input regarding deactivation and decommissioning (D&D) activities is gathered during Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and National Environmental Policy Act (NEPA) processes, which precede Records of Decision (RODs) for cleanup. Information on the status of RODs and opportunities for input during the CERCLA and NEPA processes will be shared by the EM SSAB Deputy Designated Federal Officials at your site. This is your best opportunity for early input. Although your board is encouraged to make recommendations at any point in the cleanup process and all recommendations will be considered carefully, once cleanup plans are in place, changes regarding facility D&D become more complex.



Again, thank you for your recommendation. If you have any questions, please contact Ms. Melissa A. Nielson, Director, Office of Public and Intergovernmental Accountability, at (202) 586-0356 or Ms. Cate Alexander, Designated Federal Officer, Environmental Management Site-Specific Advisory Board, at (202) 586-7711.

Sincerely,

A handwritten signature in cursive script, appearing to read "David Huizenga".

David Huizenga
Acting Assistant Secretary for
Environmental Management

cc: M. McCormick, RL
S. Samuelson, ORP
C. Alexander, EM-42
M. Nielson, EM-42



Department of Energy

Washington, DC 20585

December 12, 2011

Dr. Walter Wegst, Chair
Nevada Site Specific Advisory Board
Navaro, Inc.
232 Energy Way, M/S 505
North Las Vegas, Nevada 89030

Dear Dr. Wegst:

Thank you for your September 19, 2011, letter recommending that the Department of Energy (DOE) consider using Federal transport and/or disposition funds to relocate designated cultural/historic property items to outside organizations, when the organizations are unable to fund the relocation themselves. As you summarized in your letter, it is the current policy of DOE and Office of Environmental Management (EM) to donate property with cultural or historic value when that property no longer has reuse value to the Government, has been deemed appropriate for beneficial reuse, and has been identified for disposition. The receiving entity is responsible for the associated removal and/or transport costs to the offsite destination.

Specifics regarding disposition of cultural or historic property and associated negotiations between the EM site and the interested organization are handled by the Field Manager, and his or her staff, on a case-by-case basis, in accordance with field site budget authority. As a part of those negotiations, it is reasonable, as your recommendation suggests, for Field Managers to evaluate Federal disposition costs relative to relocation costs in making decisions about cultural or historic property, where the receiving entity does not have funds to pay for removal and/or transport and has asked for Federal support for this purpose.

The EM budget must be managed and allocated toward mission goals of compliance, cleanup, and closure of its mission sites. Field Managers and their staff have to first ensure that EM cleanup goals are achieved in a safe, timely, and compliant manner. EM will consider Federal financial facilitation of the relocation if the following criteria are met:

- 1) the cultural or historic item has no reuse value to the Government
- 2) the item will be donated to an outside organization,
- 3) EM funds are available, and
- 4) the cost of the relocation is less than or comparable to that of standard disposal estimates.



Within those circumstances, EM will work with the property receiving entity to explore legal financial mechanisms to facilitate reuse of the cultural and historic items.

Thank you for your recommendation. We look forward to working with you to facilitate reuse of historic or cultural property items.

If you have any questions, please contact Ms. Melissa A. Nielson, Director, Office of Public and Intergovernmental Accountability, at (202) 586-0356 or Ms. Cate Alexander, Designated Federal Officer, Environmental Management Site-Specific Advisory Board, at (202) 586-7711.

Sincerely,

A handwritten signature in black ink, appearing to read "David Huizenga". The signature is fluid and cursive, with a large initial "D" and "H".

David Huizenga
Acting Assistant Secretary for
Environmental Management

cc: S. Wade, NV
C. Alexander, EM-42
M. Nielson, EM-42



Department of Energy

Washington, DC 20585

November 23, 2011

Dr. Walter Wegst, Chair
Nevada Site Specific Advisory Board
Navaro, Inc.
232 Energy Way, M/S 505
North Las Vegas, Nevada 89030

Dear Dr. Wegst:

Thank you for your September 19, 2011, letter recommending that we identify waste that could be transported for disposal by rail instead of highway, and improve communication with local communities impacted by the loading and unloading of the waste from one conveyance to the other. Within the Office of Environmental Management (EM), we routinely look at our transport options when we begin transportation planning. We have had great success using rail for shipments to both EnergySolutions in Clive, Utah, and the Nevada National Security Site (NNSS). As stated in your recommendation, the use of a truck-to-rail transload facility in Antonito, Colorado, to support the Los Alamos National Laboratory cleanup activities could have been successful with early engagement with the local community. This has certainly been our practice for many other shipping campaigns, and we have learned some significant lessons from this particular campaign related to providing detailed information and education to our affected stakeholders.

For the period of fiscal years (FY) 2004 through 2010, EM shipped over 35,000 railcars of waste for disposal to EnergySolutions and NNSS. We continue to look at the advantages of using rail versus highway. Some of the factors in our decision-making process include distance, existing rail service or a nearby transload facility, volume, type of material, and costs. It is also prudent for us to review our mode of transport in addressing the Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, which requires Government agencies to reduce the greenhouse gas emissions.

We have had some very successful rail campaigns within EM that assisted in the completion of the cleanup activities ahead of schedule. Part of the process was the early coordination and collaboration with the stakeholder community. In an effort to ensure consistent planning and execution of off-site transportation activities, the Department issued the Department of Energy (DOE) Manual 460.2-1A, *Radioactive Material Transportation Practices Manual*, which establishes a set of standard transportation practices for DOE organizations to use in planning and executing off-site shipments of radioactive materials including radioactive waste. These practices establish a standardized process and framework for interacting with State, Tribal, and local authorities, transportation contractors, and carriers regarding DOE radioactive material shipments. This document was developed under the Transportation External Coordination Working Group (now the National Transportation Stakeholders Forum), which was established to improve communications with external groups impacted by our shipping activities.



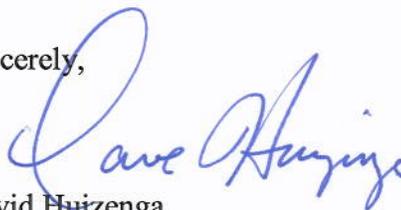
One of our early successes using rail involved cleanup activities at the Fernald Closure Project (FCP). In early planning, FCP determined that rail would be the most effective way to move bulk waste to EnergySolutions for disposal. Both the generator site and disposal site (EnergySolutions) had direct rail access. Through early planning and analyses, it was determined the best solution for the estimated 1,200,000 tons of waste was the use of unit trains (40 or more railcars of the same material, origin, and destination). A total of 12,000 railcars, totaling 201 unit trains, were shipped between 1999 and 2006. In addition to FCP, there has been successful use of rail for waste shipments from other DOE waste generators. Generator sites using rail for shipments to Clive, Utah, include Rocky Flats, the Savannah River Site, Oak Ridge, and Mound.

Another success was using a transload facility in 2006 when the West Valley Demonstration Project (WVDP) began shipping waste drums to NNSS for disposal. While initial shipments were made by truck, this method was abandoned in early 2007 in favor of rail due to the total cost for truck transport (one gondola car was equal to five trucks). The railcars were loaded at WVDP in New York, and then proceeded on a 2,500-mile trip to Parker, Arizona, where they were off-loaded at a rail-to-truck transload facility. The remaining 200-mile journey to NNSS, which is not serviced by rail, was completed by highway. NNSA recently issued a draft Site-wide Environmental Impact Statement (SWEIS) that assesses the advantages of using rail-to-truck transload facilities for shipments destined to their site. The SWEIS identifies several existing rail transload facilities that could be used by waste generator sites for waste destined for disposal at NNSS.

We will continue to evaluate the risks, costs, and efficiencies of our cleanup activities as they relate to the use of rail versus highway. Safety will continue to be our major focus, and we are committed to improving our communications with the impacted communities through the National Transportation Stakeholders Forum (NTSF) and our interaction with the Regional Government Groups (Western Governors Association, Southern States Energy Board, and the Northeastern and Midwestern Council of State Governments). Under the NTSF, we have established a Communications Working Group that will enhance DOE public information materials addressing transportation activities used by States, regional groups, Tribes, and the public.

If you have any further questions, please contact me or Ms. Cate Alexander, Designated Federal Officer, Environmental Management Site-Specific Advisory Board, at (202) 586-7711.

Sincerely,



David Huizenga
Acting Assistant Secretary for
Environmental Management

cc: C. Alexander, EM-42
M. Nielson, EM-42



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



JAN 09 2012

Kathy Bienenstein, Chair
Nevada Site Specific Advisory Board
232 Energy Way
N. Las Vegas, NV 89030

RESPONSE TO NEVADA SITE SPECIFIC ADVISORY BOARD'S (NSSAB) LIAISON POSITION RECOMMENDATION

I have received your letter dated December 7, 2011, regarding liaisons on the NSSAB, and I will begin working on responses to all of your recommendations immediately. Below are a list of the recommendations and the response activities for each.

Recommendation: The U.S. Department of Energy (DOE) should consider creating liaison positions for the following counties: Esmeralda, Lincoln, Elko, White Pine, and Inyo (CA).

Response: The Nevada Site Office (NSO) will offer a liaison position on the NSSAB to the requested counties.

Recommendation: DOE should explore funding options for a potential Native American tribal liaison.

Response: The NSO is currently evaluating the path forward for this recommendation and the NSSAB can anticipate a response by January 31.

Recommendation: Expand the liaison responsibility description in the NSSAB Standard Operating Procedures to include a short verbal report at each Full Board meeting and, if the liaison is unable to attend, a written report will be submitted to the NSSAB Administrator via e-mail at least two days prior to the meeting date.

Response: The NSO will amend Section V.B (Liaison Commitments) to include these expanded communication commitments.

Recommendation: DOE send annual letters at the beginning of the fiscal year to all organizations with unfilled/non-participating liaison positions to determine status.

Response: The NSO will complete this recommendation.

Recommendation: DOE send a letter to the U.S. National Park Service to determine if there is continued interest in holding a liaison position and commitment to liaison responsibilities.

Response: The NSO has completed this recommendation.


Kelly K. Snyder
Deputy Designated Federal Officer

PSG:8177.KKS

cc via e-mail:

C. B. Alexander, DOE/HQ (EM-13) FORS

M. A. Nielson, DOE/HQ (EM-13) FORS

D. M. Rupp, N-I, Las Vegas, NV

C. G. Lockwood, PSG, NNSA/NSO, Las Vegas, NV

NNSA/NSO Read File