Nevada Site Specific Advisory Board (NSSAB)

Full Board Meeting

National Atomic Testing Museum
755 East Flamingo, Las Vegas, NV
5:00 p.m. – November 19, 2014

Members Present:	Amina Anderson, Michael D'Alessio, Pennie Edmond, Donna Hruska (Chair), Janice Keiserman (Vice-Chair, via phone), James Manner, Michael Moore, Donald Neill, Steve Rosenbaum, Edward Rosemark, William Sears, Thomas Seley, Cecilia Flores Snyder, Jack Sypolt, James Tallant, Francisca Vega
Members Absent:	Michael Anderson
Liaisons Present:	Phil Klevorick (Clark County), Richard Arnold (Consolidated Group of Tribes and Organizations [CGTO]), John Klenke (Nye County Nuclear Waste Repository Project Office [NWRPO]), Mark McLane (State of Nevada Division of Environmental Protection [NDEP])
Liaisons Absent:	Ralph Keyes (Esmeralda County Commission), Mike Lemich (White Pine County Commission), Charlie Myers (Elko County Commission), Jonathan Penman-Brotzman (National Park Service [NPS]), Kevin Phillips (Lincoln County Commission), Dan Schinhofen (Nye County Commission)
Department of Energy (DOE):	Kathryn Knapp, Cindy Lockwood (Alternate Deputy Designated Federal Officer [DDFO]), Ken Small, Scott Wade, Bill Wilborn
Facilitator:	Barb Ulmer (Navarro-Intera [N-I])
Public Signed In:	Darrell Lacy (Pahrump, NV), Sam Marutzky (N-I), Dona Merritt (N-I), Keith Rogers (Las Vegas Review Journal), Jeff Sanders (North Las Vegas, NV), Cathy Wills (National Security Technologies [NSTec])

Open Meeting/Chair's Opening Remarks

Following the Chair's opening remarks, Member Edward Rosemark moved to approve the agenda as presented. The motion was seconded and passed unanimously.

Public Comment

There was no public comment.

U.S. DOE Update (*Scott Wade, DOE*)

Scott Wade stated that DOE is in a continuing resolution through December 11, 2014, at which time Congress will take further action regarding the budget. DOE is operating at a level below its overall Presidential request levels for Environmental Management (EM) programs. The Nevada Field Office is operating at previous fiscal year's (FY's) budget levels, approximately $60 million for EM activities. Under a continuing resolution, the full budget is not available and the sites receive fiscal allotments. During a continuing resolution, Nevada will not plan any new-start activities, but continue work that pertains to previously set milestones and performance.

Mr. Wade noted the Underground Test Area (UGTA) Activity received NDEP's approval to its Closure Report (CR) request for Corrective Action Unit (CAU) 98, Frenchman Flat. DOE can now proceed to closure of CAU 98. With the submittal of the CR, Frenchman Flat will be the first of the five UGTA CAUs to move into the final stage of the UGTA Closure Strategy. The final CR will be reviewed/approved by NDEP prior to implementation.

Mr. Wade indicated that the Soils Activity focuses on soil cleanup, including those involving the United States Air Force (USAF). A meeting with the USAF and NDEP is scheduled tomorrow in Washington D.C. to discuss the data quality objectives for Soils.

Regarding the Waste Management Activity, Mr. Wade highlighted that the Nevada National Security Site (NNSS) has accepted approximately 89,000 cubic feet (ft^3) of low-level waste (LLW) in 108 shipments and 12,000 ft^3 of mixed low-level waste (MLLW) in 17 shipments this FY. On average, the NNSS receives 20 to 30 shipments per week. The waste forecast for FY 2015 is 1.7 million ft^3 which is slightly higher than previous FY's projected volumes of approximately 1.2 million ft^3. The peak of waste volume acceptance was in FY 2004 with approximately 3.5 million ft^3 received by the NNSS. Ultimately, the waste volume is directly proportional to site budgets. As site budgets lower, the volume of waste shipped to the NNSS diminishes.

Assessment of the UGTA Quality Assurance Plan (QAP) Implementation (Work Plan Item #8) *(Sam Marutzky, N-I)*

- **NSSAB Work Plan Item #8**
  - One or two NSSAB members to observe an UGTA QAP implementation assessment in order to provide a recommendation on possible improvements to the assessment process and/or the UGTA QAP
- **UGTA Background**
  - 1951 to 1992: United States government conducted 828 underground nuclear tests at the NNSS at depths ranging from approximately 90 to 4,800 ft 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
- The purpose of the UGTA Activity is to protect human health and the environment from contamination resulting from the tests
- The UGTA objective is to define perimeter boundaries for each CAU over the next 1,000 years using:
  - Characterization
    - Data collection and evaluation (drilling, aquifer testing, sampling and analysis, laboratory studies)
    - Modeling (conceptual, geologic, hydrologic/flow, and contaminant transport)
  - Model Evaluation
    - Iterative data collection and model refinement
- The goal is to provide the characterization data, model forecasts, and monitoring results to facilitate informed regulatory decisions required for closure by the Nevada Field Office (NFO) and NDEP
- Closure of each CAU will include establishing a long-term monitoring network, institutional controls, inspections and periodic re-evaluations
- QAP provides the overall quality assurance (QA) requirements and general quality practices to be applied to the UGTA activities

- **QAPs – What are They**
  - QA makes sure the right things are done the right way
  - QAP describes the procedures, specifications, and other technical activities that must be implemented to ensure that the results will meet the specifications
    - Defines roles and responsibilities
    - Establishes data collection, data management, records, and software/modeling requirements
    - Provides framework for assessments, reports to management and corrective actions
  - Major objectives of a QAP are to ensure:
    - **Traceability:** is achieved when a reviewer with sufficient training and access to supporting information is able to follow the flow of information from source data to the results reported in released documents
    - **Reproducibility:** is achieved when a model or data can be 1) restored to any check point in time when it was used to produce reported results and 2) rerun to obtain the reported results
- **UGTA QAP**
  - DOE document overarching UGTA participant's quality programs
    - Base requirements
    - Does not preclude participants having corporate QAPs
  - Based on U.S. Environmental Protection Agency (EPA) guidance for model QA and DOE Order 414
  - Reviewed and approved by NDEP
- **UGTA QAP History**
  - Historic QAPs were focused on sample collection and analysis
  - Modeling software concerns and new state law regarding laboratory certification led to revising QAP in 2011 and including new requirements
  - Four sections:
    - Management

        - Work processes
        - Assessment and oversight
        - Corrective action
- **Management Section**
    - Problem definition and background
    - Description
    - Roles and responsibilities
    - Qualifications and training
    - Quality objectives and criteria
    - Document control
    - Records management
    - Information/data management
    - Procurement
    - Computer software and codes
    - Identification and control of items
    - Measuring and test equipment
- **Work Processes Section**
    - Data quality indicators
    - Field operations
    - Laboratory analyses
    - Laboratory studies
    - Non-direct data
    - Groundwater flow and transport modeling
    - Model evaluation
    - Configuration control
- **Assessment and Oversight Section**
    - Assessment
    - Technical reviews
    - Peer review
    - Document review and issuance
    - Reports to management
- **Corrective Action Section**
    - Suspend/Stop Work
    - Event/Issues tracking
    - Causal Analysis
    - Trend Analysis
    - Lessons learned
- **QAP Implementation**
    - Implementation plan for new requirements
        - Gap analysis – identify need for new procedures or revisions to existing procedures
        - UGTA Committees standardized forms and requirements
        - Implementation
        - Evaluation (current stage)
        - Revise QAP

- **UGTA QAP Link**
  - Current QAP: UGTA Activity Quality Assurance Plan Nevada National Security Site, Nevada, DOE/NV—1450-Rev. 1, dated October 2012
    - Available online: http://nnsa.energy.gov/sites/default/files/nnsa/11-13-multiplefiles/36%20UGTA%20QAP%20Rev.%201.pdf
- **QAP Implementation – Evaluation and Revision**
  - NFO leads assessment team
    - Desert Research Institute (DRI) scheduled December 8-10, 2014
    - Lawrence Livermore National Laboratory (LLNL) scheduled January 2015
    - Los Alamos National Laboratory (LANL) conducted August 2014
    - NSTec, LLC conducted April 2014
    - N-I, LLC conducted January 2014
    - United States Geological Survey conducted June 2014
  - Review/revision of QAP scheduled January - March 2015
    - Assessments have identified needed changes to QAP
- **Assessments**
  - NFO Order 226.X, Line Oversight Program
    - Federal employee is lead assessor
    - Notification letter
    - Criteria and Review Approach Documents
      - Follow four sections of QAP
      - Summary of checklist items
    - Checklist
      - More detailed requirements from QAP
  - In-brief and exit meetings
  - Document reviews; personnel interviews; work observations
  - Issue report within 30 days
    - Finding – violations of QAP, procedure, or policy requirements
    - Opportunities for improvement – a suggestion or recommendation for continuing improvement
    - Observations – a condition that is not a violation of a requirement, but if left unattended could lead to a finding
    - Best management practices – a good management process that should be shared with other participants
- **Corrective Actions**
  - Issues require formal corrective action
  - UGTA tracking system
- **NSSAB Path Forward**
  - One or two NSSAB members invited to observe an UGTA QAP implementation assessment
    - DRI – Las Vegas – December 08-10, 2014
  - NSSAB discussion and decision on member(s) attendance
  - Attendees report their observations to the Full Board on January 21, 2015
  - Recommendation due to DOE by February 18, 2015

In response to Board questions, the following clarifications were provided:

- While there were other national laboratories that performed experiments during testing, DOE utilizes LLNL and LANL's expertise in assisting with the data collection and laboratory analyses specific to the UGTA Activity.

- In response to the graphic on page four of the presentation, 'Protection' and 'Communication' are the foundational requirements for the UGTA Activity and all EM activities. The four activities, 'Drilling,' 'Sampling,' 'Monitoring,' and 'Modeling,' are the primary activities that DOE engages in to fulfill these requirements to protect and to communicate with the public. This graphic illustrates that the process is iterative and encompasses all the UGTA activities that DOE addresses and their relationship.
- The requirements are specified in the Quality Assurance Plan and resulted from the previous Quality Assurance Project Plan, as well as the latest EPA guidance on modeling. The EPA also provides guidance on laboratory analyses. A gap analysis was conducted by comparing actual practices in 2011 to the requirements, and substantial corrections were made as a result.

Following Board discussion, Member Cecilia Flores Snyder and Member Francisca Vega volunteered to be the NSSAB observers of the UGTA QAP implementation assessment.

Annual NNSS Environmental Report (Work Plan Item #5) *(Cathy Wills, NSTec)*

- **NSSAB Work Plan**
  - Work Plan Item: *Annual NNSS Environmental Report*
  - Recommendation Due: January 2015
  - Description: In November 2014, the NFO will provide a briefing that explains the Annual Nevada National Security Site Environmental Report (NNSSER) and provide copies of the 2013 summary of this report and sections of similar reports by other DOE sites.
    From a community perspective, the NSSAB will provide a recommendation on how the document could be enhanced (i.e., readability, presentation of information, likes and dislikes between NNSSER and other DOE sites' Annual Site Environmental Reports [ASERs]).
- **Presentation of Work Plan Item 5**
  - NFO to provide copies of the 2013 annual NNSSER and a briefing that explains the report
  - This presentation will:
    - Identify sections of the 2013 NNSSER that the NSSAB is tasked to review (those portions for which DOE Environmental Management is responsible)
    - Present DOE Headquarters' (HQ) guidance regarding the recommended content of those NNSSER sections
    - Provide Internet links to (and/or hard copies of) similar sections from other DOE/National Nuclear Security Administration sites' ASERs for comparison
- **Sections of NNSSER to Review**
  - NSSAB to provide recommendations regarding the presentation of information in the following four portions of the NNSSER:
    - Summary Pamphlet
    - Chapter 5, Section 5.1 – Radiological Water Monitoring
    - Chapter 10, Section 10.1 – Radioactive Waste Management
    - Chapter 11 – Environmental Restoration
  - Each NSSAB member is asked to choose at least one of these four areas to review
  - Each area needs a leader to consolidate comments and suggestions
- **Summary Pamphlet Review**
  - Please provide responses to the following questions:
    - Is the purpose of the Summary clear?

        - Is the information presented in a logical sequence?
        - Is it written at the right technical level for the public?
        - Is information of public interest adequately explained and clearly presented?
        - Are figures and tables helpful and understandable?
        - Any recommendations for improvement?
        - Are other site's Summary documents better at presenting information or better in other ways?
- **DOE/HQ Guidance for ASER Summaries**
    - ASERs should be prepared in a manner that addresses likely public concerns and solicits feedback from the public and other stakeholders on site environmental management performance and compliance.
    - Some recent successful approaches illustrating this include publication of a summary pamphlet targeted for the general public or non-technical reader that accompanies the ASER.
    - Community involvement in preparing the summary pamphlet is encouraged.
- **Other DOE/NNSS ASER Summaries**
    - Argonne National Laboratory (ANL), Illinois
        - http://www.anl.gov/sites/anl.gov/files/SSER2012.pdf
        - *(Note: the above link is to the 2012 Summary. The 2013 Summary will not be published until January/February 2015)*
    - LANL, New Mexico *(25 hard copies provided to NSSAB)*
        - http://www.lanl.gov/community-environment/environmental-stewardship/environmental-report.php
    - Savannah River Site (SRS), South Carolina (*25 hard copies provided to NSSAB)*
        - http://www.srs.gov/general/pubs/ERsum/
- **Chapter 5 Review - Radiological Groundwater Monitoring**
    - For Section 5.1, please provide responses to the following questions:
        - Is it written at the right technical level?
        - Is the level of detail appropriate?
        - Are the data clearly presented and easy to understand?
        - Is the use of % maximum contaminant level (MCL) instead of picocuries per liter (pCi/L) for tritium concentration results helpful? (for example, in Figure 5-3)
        - Is information of public interest clearly indicated or highlighted?
        - Do captions adequately describe figures and tables?
        - Any recommendations for improvement?
- **DOE/HQ Guidance for Groundwater**
    - Include a brief description of site hydrological conditions, including cross-sections of subsurface conditions at the site
    - Include references to additional technical documents detailing the hydrological conditions, including groundwater flow and potential receptors
    - Include data on facility up-gradient and down-gradient wells at Resource Conservation and Recovery Act (RCRA) hazardous waste units, DOE Radioactive Waste Management Units, RCRA or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remediation sites, and identified compliance points to track groundwater plume movement
    - Identify groundwater monitoring wells operated for other purposes (aquifer characterization, environmental surveillance, compliance monitoring)

- Show trends in ground-water plume movement over a five year period, at a minimum. Trend data should be displayed graphically or presented as basic statistics (such as median values and ranges) for contaminants commonly detected at the site.
- Discuss real or potential impact of groundwater plume and contaminant movement on public drinking water supplies.
- Highlight monitoring wells with significant changes in contamination indicator parameters above background levels
- Describe site groundwater monitoring network objectives and the monitoring network(s) established to meet the objectives
- Include tables to summarize the number of active wells by area of the site and by purpose
- Address the number of wells installed or abandoned during the current year and any unique or innovative techniques used in the site groundwater monitoring network in the tables

- **Other DOE/NNSS ASERs– Radiological Groundwater Monitoring**
  - Brookhaven National Laboratory (BNL), New York
    - Chapter 7: Groundwater Protection
      - http://www.bnl.gov/esh/env/ser/
    - Groundwater Status Report *(link shown on same page)*
  - Hanford Site, Washington
    - Section 8, Groundwater Monitoring
      - http://msa.hanford.gov/page.cfm/EnvironmentalReports2001-latest
  - Idaho National Laboratory (INL), Idaho
    - Chapter 6 – Environmental Monitoring Program – Eastern Snake River Plain Aquifer
      - http://www.gsseser.com/Publications.htm#Annual
  - LANL, New Mexico
    - Section 5.0, Groundwater Monitoring
      - http://www.lanl.gov/community-environment/environmental-stewardship/environmental-report.php
  - Oak Ridge, Tennessee (Y-12 National Security Complex)
    - Section 4.6, page 4-66, Groundwater at the Y-12 Complex
      - http://web.ornl.gov/sci/env_rpt/
  - SRS, South Carolina
    - Chapter 7, Groundwater
      - http://www.srs.gov/general/pubs/ERsum/index.html
- **Chapter 10 Review – Radioactive Waste Management**
  - For Section 10.1, please provide responses to the following questions:
    - Is it written at the right technical level?
    - Is the level of detail appropriate?
    - Are the data clearly presented and easy to understand?
    - Is information of public interest clearly indicated or highlighted?
    - Do captions adequately describe figures and tables?
    - Any recommendations for improvement?
- **DOE/HQ Guidance for Radioactive Waste Management**
  - Briefly summarize site progress in achieving compliance with DOE Order 435.1, Radioactive Waste Management

        - Include information on the wastes that are managed at the site (e.g., high level, low level, transuranic) and what type of waste management the site is performing (e.g., generation, treatment, storage, disposal)
        - Include the status of each phase of the LLW management process (e.g., performance assessment, composite analysis [PA/CA], closure plan, PA/CA maintenance program, disposal authorization statement) for LLW facilities
    - Include a narrative description of the site LLW management program
    - Include a discussion of radioactive waste management activities
- **Other DOE/NNSS ASERs– Radioactive Waste Management**
    - BNL, New York
        - Chapter 2, Environmental Management System, Section 2.3.4.3, Waste Management
            - http://www.bnl.gov/esh/env/ser/
    - Hanford Site, Washington
        - Section 5, Environmental Restoration & Waste Management, Section 5.3, Waste Management Activities
            - http://msa.hanford.gov/page.cfm/EnvironmentalReports2001-latest
    - INL, Idaho
        - Chapter 3, Environmental Program Information, Section 3.3, Waste Management and Disposition
            - http://www.gsseser.com/Publications.htm#Annual
    - LANL, New Mexico
        - Section 2.0, Compliance Summary, Subsection B.3.b., Radiation Protection, DOE Order 435.1, Radioactive Waste Management (page 2-10)
            - http://www.lanl.gov/community-environment/environmental-stewardship/environmental-report.php
    - Oak Ridge, Tennessee
        - Section 3 (East Tennessee Technology Park), Subsection 3.8.1, Waste Management Activities (page 3-82)
        - Section 5, Oak Ridge National Laboratory, Subsection 5.8.9, Oak Ridge National Laboratory Waste Management (page 5-92)
            - http://web.ornl.gov/sci/env_rpt/
    - SRS, South Carolina
        - Chapter 3, Compliance Summary, Page 3-2, Waste Management
            - http://www.srs.gov/general/pubs/ERsum/index.html
- **Chapter 11 Review - Environmental Restoration**
    - For Chapter 11, please provide responses to the following questions:
        - Is it written at the right technical level?
        - Is the level of detail appropriate?
        - Are the data clearly presented and easy to understand?
        - Is information of public interest clearly indicated or highlighted?
        - Do captions adequately describe figures and tables?
        - Any recommendations for improvement?
- **DOE/HQ Guidance for ER**
    - Discuss ER activities so as to describe the site's compliance status with the following:
        - CERCLA
        - Superfund Amendments and Reauthorization Act (SARA)
        - RCRA

- *(Note: ER activities on the NNSS are driven by RCRA compliance and by the Federal Facility Agreement and Consent Order (FFACO) between DOE and the State of Nevada. No ER activities on the NNSS are driven by CERCLA)*

- **Other DOE/NNSS ASERs – ER**
  - Hanford Site, Washington
    - Sections 5.1, Cleanup and Remediation Activities, and Section 5.2, Facility Decommissioning Activities
      - http://msa.hanford.gov/page.cfm/EnvironmentalReports2001-latest
  - INL, Idaho
    - Chapter 3, Section 3.2 – Environmental Restoration
      - http://www.gsseser.com/Publications.htm#Annual
  - LANL, New Mexico
    - Section 9.0, Environmental Restoration
      - http://www.lanl.gov/community-environment/environmental-stewardship/environmental-report.php
  - Oak Ridge, Tennessee (Y-12 National Security Complex)
    - Section 4.8, Environmental Management and Waste Management Activities, subsections 4.8.1 and 4.8.2 (page 4-92)
      - http://web.ornl.gov/sci/env_rpt/
  - SRS, South Carolina
    - Chapter 3, Compliance Summary, Page 3-2, Environmental Restoration
      - http://www.srs.gov/general/pubs/ERsum/index.html
- **General NNSSER Review Questions**
  - In addition to your recommendations from the chapter/section-specific reviews, do you have any suggestions for:
    - Ways to inform the interested public about the availability and content of the NNSSER?
    - Ways to solicit feedback from the public regarding the NNSSER content and format in order to improve the document?
- **NSSAB Path Forward**
  - Each NSSAB member asked to choose at least one of these four areas to review:
    - Summary
    - Chapter 5, Section 5.1 – Radiological Groundwater Monitoring
    - Chapter 10, Section 10.1 – Radioactive Waste Management
    - Chapter 11 – Environmental Restoration
  - Each team asked to choose a leader to consolidate comments and suggestions
  - Each team leader provides NSSAB Office with the team's consolidated comments/suggestions by January 5, 2015
  - NSSAB Office uses team comments/suggestions to prepare a draft recommendation for the NSSAB to review/discuss/approve at the January 21, 2015 meeting

In response to Board questions, the following clarification was made:

- The NNSS does not have a program in which a student authors the annual summary as it has historically been a responsibility of the Editor. Cathy Wills, the current Editor, telecommutes from Arizona; so coordinating with a Nevada school, teacher, and student would be a challenge.

Following Board discussion, members were grouped into the following teams:

- **Summary:** Francisca Vega (*Leader*), Michael D'Alessio, Donna Hruska, James Manner, Donald Neill, Edward Rosemark, Thomas Seley
- **Radiological Groundwater Monitoring:** Michael Moore (*Leader*), Edward Rosemark, Williams Sears, Cecilia Flores Snyder, Jack Sypolt, James Tallant
- **Environmental Restoration:** Donna Hruska (*Leader*), Amina Anderson, Pennie Edmond, Janice Keiserman, Steve Rosenbaum, Thomas Seley
- **Radioactive Waste Management:** Janice Keiserman (*Leader*), Amina Anderson, Michael D'Alessio, Donald Neill, Steve Rosenbaum, William Sears

Potential New RCRA Part B Permitted Mixed Waste Disposal Unit (Work Plan Item #9) *(Ken Small, DOE)*

- **NSSAB Work Plan Item #9**
  - From a community perspective, the NSSAB will provide a recommendation on a path forward for mixed waste disposal at the NNSS
- **What is MLLW?**
  - MLLW is waste that contains both low-level radioactive waste and a hazardous component (toxic, corrosive, reactive, ignitable, or specifically identified by the EPA as "hazardous")
  - Typical MLLW includes containerized trash, soil, equipment, tools, building debris and discarded personal protective equipment
- **RCRA Background**
  - Enacted by Congress in October 1976 to address the increasing problems our nation faced from its growing volume of municipal and industrial waste
  - Provides technical and financial assistance for the development of management plans and facilities for the recovery of energy and other resources from discarded materials and for the safe disposal of discarded materials, and to regulate the management of hazardous waste
  - RCRA set national goals for:
    - Protecting human health and the natural environment from the potential hazards of waste disposal
    - Energy and natural resource conservation
    - Reducing the amount of waste generated, through source reduction and recycling
    - Ensuring the management of waste in an environmentally sound manner
  - RCRA most widely known for the regulations that set standards for the treatment, storage, and disposal of hazardous waste in the United States
  - MLLW at the NNSS is regulated under the RCRA
- **Where Does MLLW Come From?**
  - MLLW is generated by environmental cleanup and waste processing activities at DOE sites, including the NNSS
- **MLLW Volumes**
  - In FY 2014, approximately 82K ft^3 of MLLW was received by the NNSS
  - The total MLLW disposed in Cell 18 in the Area 5 Radioactive Waste Management Complex is approximately 440K ft^3 since inception
  - In FY 2014, MLLW comprised approximately 6.5% of the total waste disposed at the NNSS

- **History of MLLW Disposal at the NNSS**
  - Pit 3 was the original MLLW disposal site at the Area 5 Radioactive Waste Management Complex
  - MLLW Cell 18 was negotiated with NDEP over a five-year period
  - MLLW Cell 18 approval by NDEP was contingent on closing Pit 3
  - MLLW Cell 18 was opened in December 2010
- **NNSS MLLW Considerations**
  - Defined in DOE Order 435.1, "Radioactive Waste Management," that ensures that all DOE radioactive waste is managed in a manner that is protective of workers and the public
  - Generators must meet the following criteria in order to ship MLLW to the NNSS for disposal:
    - A clear connection, or series of connections, showing the waste is eligible for disposal at the NNSS
    - Title 40 Code of Federal Regulations land disposal restrictions
      - Some waste may have to be treated to meet these standards
    - NNSS Waste Acceptance Criteria (WAC) for radiological and hazardous components
- **Permitting Process**
  - Public meeting held to inform community of intent to submit permit application
  - DOE accepts and considers comments on its intent to submit the application to NDEP
  - DOE submits the permit application to NDEP
  - NDEP reviews permit application and returns comments to DOE
  - DOE responds to and resolves NDEP comments
  - NDEP conducts a public comment period on the draft permit
  - NDEP resolves public comments in conjunction with DOE
  - NDEP notifies DOE regarding permit decision
- **Typical Permit Terms and Conditions**
  - RCRA permit valid for five years
  - NDEP determines the disposal volume limit
  - Waste stored in boxes and/or drums in accordance with U.S. Department of Transportation (DOT) requirements and NNSS WAC
  - NDEP conducts annual inspections
  - NDEP has authority to revoke permit
- **MLLW Cell 18 Background**
  - Public meetings held 2010
  - RCRA permit issued July 2010
  - Constructed from August through December 2010
  - Disposal began in January 2011
- **MLLW Disposal Cell 18 Current Conditions**
  - Cell capacity of 900K ft^3
    - Approximately 50% full
    - Expect to reach capacity in 2018/2019
  - Double liner system consists of five layers
  - Liner system is covered with native compacted, graded native alluvial soil

- **MLLW Cell 18 Design**
  - Diagrams available at: http://www.nv.energy.gov/nssab/documents/handouts/fy%202015/FB/11-19-14%20-%20Full%20Board%20Handouts%20RED.pdf (page 68 and 69)
- **NSSAB Path Forward**
  - NSSAB members toured MLLW Cell 18 and received a briefing in October 2014
  - Per NSSAB request, additional MLLW Cell 18 documents available:
    - RCRA Permit
    - Engineering documents
    - Tonight – discuss tour observations and briefing
  - From a community perspective, the NSSAB will provide a recommendation on a path forward for MLLW disposal at the NNSS by January 21, 2015

In response to Board questions, the following clarifications were provided:

- The current permit states that it is valid for five years or until the facilities reach capacity. If the five years are reached first, the permit can be renewed. DOE is currently in discussion with NDEP regarding the renewal process.
- NDEP has the authority to revoke the permit in the event that DOE fails to comply with permit requirements.
- Should DOE determine that a larger MLLW cell is necessary, there are no distance regulations at Area 5 Radioactive Waste Management Complex.
- DOE has project management construction requirements that are tracked by the Office of Management and Budget. If a larger MLLW cell is built, there would be additional costs incurred during construction. Additional approvals are required for projects at increased cost thresholds. Depending on the dollar amount, the approval may include the Secretary of Energy. DOE takes into consideration and balances the operational needs, the anticipated MLLW volumes, number of years to fill the proposed cell, and the practicalities of securing the funds from Congress.
- There is a lecheate collection and removal system and groundwater monitoring conducted in/near the Area 5 Radioactive Waste Management Complex.
- The closed MLLW Pit 3 could not be rehabbed and reopened, because it does not conform to current standards.
- The existing permit limits the volume of MLLW that is disposed in MLLW Cell 18.
- MLLW disposal is expected to decrease in future years, and that is considered when determining the size of the proposed MLLW cell.

Following discussion, the Board decided that a draft recommendation letter be written to include the following points:

- The NSSAB perceives a need for additional space for MLLW
- The NSSAB supports MLLW disposal at the NNSS
- DOE should research the feasibility of a larger cell for proposed MLLW cell
- DOE should discuss MLLW transportation procedures with stakeholders as DOE moves forward with the proposed MLLW cell
- DOE should define LLW/MLLW in more understandable terms for the public
- DOE should consider creating a display box containing mock MLLW examples

The draft recommendation letter will be available at the January 21, 2015 meeting for Board deliberation and approval.

Other NSSAB Business (*Donna Hruska, Chair*)
Chair Donna Hruska thanked the members who attended the Community Environmental Monitoring Program (CEMP) Workshop on September 21, 2014. The full-day training included information on basic radiation training and monitoring activities.

The NSSAB Orientation was held on October 8, 2014, and it was attended by all the new members. A comment was made that the no host dinner after the Orientation should be continued. The annual NNSS tour for the NSSAB was conducted on October 29, 2014, and was very informative and the itinerary included visiting sites included in the NSSAB Work Plan. A comment was made that it should be stressed to new members that the tour is an integral part of the educational process.

The former Chair Kathleen Bienenstein and Chair Hruska attended the EM SSAB National Chairs' Meeting held September 15-18, 2014 in Idaho Falls, Idaho. Some of the topics discussed included the 20th Anniversary of Community Involvement of the EM SSAB, how budgets are determined and each individual board's input, and a lengthy discussion of Waste Isolation Pilot Plant (WIPP) in New Mexico.

The following draft recommendation was generated during the EM SSAB National Chairs' Meeting:

- Initiate Process of Permit Modification for Additional Surface Storage at WIPP to provide aboveground transuranic (TRU) waste interim storage installation at WIPP so that EM sites can proceed with TRU waste shipments even before the underground WIPP disposal operation is approved for reopening.

Following Board review and discussion, the decision to vote on the draft recommendation was deferred to a later date as the Board felt that it did not have enough information. The NSSAB Office provided a link to the WIPP Recovery Page at http://wipp.energy.gov/wipprecovery/recovery.html that includes an accident description, past and current WIPP updates, news releases, and the WIPP Recovery Plan, dated September 30, 2014.

Member Jack Sypolt attended a Transportation Tabletop and Emergency Responders tour of the NNSS on September 24, 2014. Member Sypolt provided an update that the intent of the tour was to focus on waste transportation and waste offloading activities which did not occur during the tour. Member Sypolt stated that the tour guide did not seem well-versed on the intended topics.

Two letters were provided to Board members for informational purposes:

- NSSAB Recommendation for Radioactive Waste Acceptance Program (RWAP) Facility Evaluation Improvement Opportunities (Work Plan Item #7) – dated September 10, 2014
- DOE Response to NSSAB Recommendation for RWAP Facility Evaluation Improvement Opportunities (Work Plan Item #7) – dated October 16, 2014

Liaison Updates

NDEP (*Mark McLane, Alternate*)
Alternate Liaison Mark McLane reported that he was impressed with the NSSAB's enthusiasm and volunteer spirit during his first NSSAB meeting.

CGTO *(Richard Arnold)*
Liaison Richard Arnold reported that he recently attended the EM/DOE State Tribal Government Working Group (STGWG). During this meeting, the tribes came together and requested that DOE develop priorities to focus on cleanup activities, evaluate funding streams, and compliance with the DOE Order 144.1 (the American Indian policy). He also participated in a separate meeting with Mark Whitney, Acting Assistant Secretary for EM, as he is very interested in tribal involvement across the DOE complex. Liaison Arnold also noted his participation in the Midwest Council of State Governments to discuss how tribes can better engage with subgroups across the country, and he has been asked to facilitate some of these discussions in providing tribal perspectives. During the meeting, topics included: EM and National Stakeholders' Forum activities, provided updates on tribal interactions and expanded tribal involvement modeled after NNSS, and a briefing by the Office of Secure Transportation which the NNSS was a topic of discussion. He has participated in several planning calls and will be attending a Tribal Summit in Phoenix, Arizona in December 2014, and having discussions with Secretary Moniz covering tribal activities in three different components: STGWG, Indian Country Energy Infrastructure Working Group, and Nuclear Energy Tribal Working Group.

NWRPO *(John Klenke)*
Facilitator Barb Ulmer, on behalf of Liaison John Klenke, reported that Liaison Klenke is participating in the Yucca Flat External Peer Review which will be completed on December 19, 2014.

Liaison Discussion Wrap-Up *(Scott Wade, DOE)*

Mr. Wade noted that a Nye County Emergency Management tour of the NNSS will be conducted November 20, 2014, which will be attended by local emergency responders. An NNSS public tour is being conducted on December 9, 2014, and Mr. Wade invited members who were not able to attend the NSSAB tour. In response to a Board question regarding a tour of the wells on Pahute Mesa, Mr. Wade stated that it is currently not the time of year to visit the area, but would be taken into consideration after the snowmelt next spring.

Communication Improvement Opportunities (Work Plan #10)

In response to providing recommendations on ways that DOE can improve/enhance communication to the public, Chair Hruska stated that the NSSAB tour was very informative, but the tour guide for future NSSAB tours should have a dynamic presentation and anecdotes and stories that assist attendees in remembering locations/facts regarding the tour of the NNSS. Member Sypolt noted that DOE should consider including information on unrelated topics at its public events, for example, waste management, waste transportation, Office of Secure Transportation information at a Groundwater Open House. These recommendations will be combined with other communication improvements throughout the FY and will be presented to the DOE for consideration at the end of the FY.

Meeting Wrap-Up/Assessment/Adjournment *(Barb Ulmer)*

The next Board meeting will be held on Wednesday, January 21, 2015 at 5 p.m. at the National Atomic Testing Museum, Las Vegas, NV. An educational session will be held at the same location at 4 p.m. on the roles and responsibilities of NDEP in regard to EM activities by Christine Andres, Bureau Chief of NDEP.

Members shared thoughts on improvements/suggestions for future meetings.

Member Michael Moore moved that the meeting be adjourned. The motion was seconded and passed unanimously.

Meeting adjourned at 8:40 p.m.