Nevada Site Specific Advisory Board (NSSAB)

Full Board Meeting

National Atomic Testing Museum, Frank Rogers Auditorium
755 East Flamingo Road, Las Vegas, NV
5:00 p.m. – November 28, 2012

Members Present:	Jason Abel, Kathleen Bienenstein (Chair), Matthew Clapp, Thomas Fisher, Arthur Goldsmith, Donna Hruska (Vice-Chair), Cheryl Kastelic, Janice Keiserman, Barry Li Marzi, Michael Moore, Edward Rosemark, William Sears, Jack Sypolt, James Weeks
Members Absent:	Edward Brown
Liaisons Present:	Demar Dahl (Elko County Commission [by phone]), Joni Eastley (Nye County Commission), John Klenke (Nye County Nuclear Waste Repository Project Office [NWRPO]), Phil Klevorick (Clark County), Tim Murphy (State of Nevada Division of Environmental Protection [NDEP]), Scott Wade (Department of Energy [DOE])
Liaisons Absent:	Marcy Brown (West Career and Technical Academy [WCTA]), Genne Nelson (National Park Service [NPS])
DOE:	Robert Boehlecke, Tiffany Lantow, Kelly Snyder (Deputy Designated Federal Officer), Bill Wilborn
Facilitator:	Barb Ulmer (Navarro-Intera [N-I])
Scribe:	Rochelle LaGrow (N-I)
Others Present:	Chris Andres (NDEP), M. Kelly, Mark Krauss (N-I), Levi Kryder (NWRPO), Darrell Lacy (NWRPO)

<u>Open Meeting/Agenda Review/Chair's Opening Remarks</u>

Following introductions, it was noted that liaisons from Elko, Esmeralda, Lincoln, and White Pine County Commissions will be joining the Board.

Facilitator Barb Ulmer stated that there will be a pre-meeting briefing beginning at 4 p.m. on the history of the Nevada National Security Site (NNSS) prior to the January 16 meeting.

After agenda review, Member Arthur Goldsmith moved to approve the agenda as presented. The motion was seconded and passed unanimously.

Liaison Updates

Clark County *(Phil Klevorick)*
On November 16, Clark County attended a DOE Transportation Working Group (TWG) meeting. The final Site-Wide Environmental Impact Statement (SWEIS) is expected to be released soon, and the TWG was an important forum for information exchange during review of the draft SWEIS. Liaison Klevorick also discussed a news briefing involving a non-NNSS nuclear waste shipment that was incorrectly reported as being transported through Las Vegas.

Elko County Commission *(Demar Dahl)*
Nothing to report.

Nye County Nuclear Waste Repository Project Office *(John Klenke)*
Nothing new to report.

Nye County Commission *(Joni Eastley)*
Liaison Eastley stated that the Nye County update will be addressed during an upcoming agenda item.

West Career and Technical Academy
Vice-Chair Donna Hruska, who is Chair of the Membership Committee, provided the WCTA update. The Membership Committee recently met with Liaison Marcy Brown on her proposals for a student project. It was agreed that Liaison Brown would pursue developing and presenting a briefing to WCTA students on the history and current activities at the NNSS and responsibilities of the NSSAB. An NSSAB letter of support to assist Liaison Brown gain teacher cooperation was included in the meeting packet.

State of Nevada Division of Environmental Protection *(Tim Murphy)*
Liaison Tim Murphy affirmed that less waste has been coming to the NNSS and that the volume of waste being transported may continue to decrease, pending congressional and DOE decisions.

U.S. National Park Service
Chair Kathleen Bienenstein read the report provided by the NPS: The Park Services primary concern is groundwater contamination and they continue to focus their attention on the studies of the Underground Test Area (UGTA) program.

U.S. Department of Energy *(Kelly Snyder, DOE)*
- SWEIS Update
    - Going through concurrence at National Nuclear Security Administration Headquarters (HQ)
    - Release of notice of availability is expected in January 2013
    - Record of Decision is expected in February 2013
- NNSS Remediation Website
    - Interactive map includes a location marker with site and contamination information, completed remediation work, current status/stage of remediation process, and related links to all public documents

    - DOE welcomes comments on website http://nnssremediation.dri.edu/
- Fiscal year (FY) 2013 budget
    - Six months continuing resolution continues
    - Environmental Management (EM) will continue to be judicious with funding

Public Comment

There was no public comment.

Work Plan Item #4
Far-Field Hydrogeologic Characterization Relevant to Underground Nuclear Test Areas - Nye County Proposal *(Levi Kryder)*

- **Introduction**
    - Work proposed to characterize contaminants from legacy underground nuclear tests on Pahute Mesa migrating through Oasis Valley towards Beatty
    - Efforts intended to be cooperative with UGTA program and address data gaps in areas that will assist in understanding the hydrogeologic flow system around NNSS
    - NWRPO staff and contractors qualified to undertake proposed tasks due to experience with Yucca Mountain, and the following programs: Early Warning Drilling, Independent Scientific Investigations, Groundwater Evaluation, and Water Level Measurement Program (WLMP)
    - All data publically available on Nye County website: http://www.nyecounty.com/
- **Work Element 1 – Shallow Piezometer Drilling Program (~$1,000,000)**
    - Series of ten shallow piezometer wells (maximum depth of 1,000 feet [ft], 4-inch diameter) to characterize the subsurface in areas around the NNSS
    - Wells in Rock Valley and Mercury Gap sited to allow personnel to obtain head relationships between aquifers
    - Wells infill data gaps and provide opportunities for collection and monitoring (gathered information added to the WLMP, currently in use and part of proposal)
- **Work Element 2 – Hydrogeologic Characterization Wells (~$2,000,000)**
    - Four deeper wells (maximum depth of 1,500 ft, 8-inch diameter) located in the 50-year maximum contaminant level (MCL) exceedance zone in Oasis Valley
    - Objectives of wells: collect water samples and water level data, determine aquifer characteristics, and obtain geologic and geophysical information within the projected radionuclide flow path
    - All boreholes expected to penetrate either the Ammonia Tanks or Rainier Mesa volcanic formations
- **Work Element 3 – Water Chemistry Monitoring ($~350,000)**
    - Expand the regional baseline water chemistry dataset through sampling and analysis of water samples from new and selected wells within the 50-year MCL exceedance zone in Yucca and Frenchman Flat
    - Provide better understanding of regional groundwater flow system
    - Apply DNA sampling techniques to characterize microbial populations in aquifers
    - Sampling events will be coordinated with other interested agencies
- **Work Element 4 – Water Level Monitoring (~$700,000)**
    - Expand Nye County's WLMP to include new and selected wells in predicted 50-year MCL exceedance area

    - Additional data provide baseline necessary for determining groundwater flow directions, flow rates, rates of recharge, and temporal groundwater level changes
- **Work Element 5 – Data Management, Analysis, and Reporting (~$500,000)**
    - Proposed budget includes development and maintenance of existing and proposed databases
    - Databases will screen and qualify data, and ensure accuracy and reliability
    - Conduct analysis of data in numerical models to determine quality and usability
    - Annual and summary reports will be published by Nye County staff and contractors
- **Budget**
    - Work element budgets all-inclusive
    - Current proposed cost of work is $4.55 million over three to four years, and costs could be spread out if necessary
    - Program startup delays possible in obtaining rights-of-way from the Bureau of Land Management (BLM)
- **Conclusions**
    - Independent data collection and dissemination efforts can lend credibility to past and ongoing Federal efforts
    - Collection of additional data will expand the regional data set, benefiting all interested organizations and ultimately the public
    - Analysis and incorporation of data into UGTA models will lead to better understanding of potential contaminant travel times and analysis of safety for down gradient water users

DOE, Nevada Site Office's Technical Needs Analysis of the Nye County Proposal *(Bill Wilborn, DOE)*

- **Background**
    - Unsolicited Nye County proposal submitted to DOE Assistant Secretary for the Office of EM in October 2011
    - DOE Nevada Site Office (NSO) technical review completed August 2012
    - Between initial submittal and technical review completion, NSO had interactions with both DOE HQ and Nye County which led to current strategy to address proposal
- **Considerations**
    - Clarification may be needed before an appropriate analysis completed
    - Review based on details provided in October 2011 proposal
    - Funding under proposal derived from existing or future EM budget
    - All existing contract commitments remain in place
    - Data generated would be available to DOE and collected consistently with Federal Facility Agreement and Consent Order (FFACO) requirements
- **Key Technical Questions**
    - Are the locations identified and data collected appropriate for current flow and transport model needs?
    - Is the data of immediate value? Should a Value of Information Analysis be applied prior to identifying collection sites?
    - What are the costs and benefits associated with these work elements?
    - Is the effort duplicative of work already being conducted? Of existing well assets?
    - Will this effort support the FFACO regulatory objectives?
    - Would the data be available for DOE analysis, interpretation, and reference?
    - Will data collection and analysis meet current model development schedules?

- **Work Element 1 – Shallow Piezometer Drilling Program**
    - Benefits
        - Any data collected is usable data
        - Data may be less expensive to collect
        - Increased Nye County technical interaction
    - Risks
        - Identified locations for data collection not driven by model data needs
        - Yucca and Frenchman Flat models and monitoring data show limited contaminant transport, and migration off NNSS unlikely
        - Required groundwater monitoring locations not identified but expected within NNSS boundaries
- **Work Element 2 – Hydrogeologic Characterization Wells**
    - Benefits
        - Same as Benefits listed for Work Element 1
    - Risks
        - Identified locations for data collection not driven by model data needs
        - Pahute Mesa transport limited to northwest border, current monitoring shows no contamination further south than ER-EC-11
        - Nye County proposal utilized Phase I model which shows contamination far south into Oasis Valley. With current knowledge, DOE is working on Phase II model which shows that the previous information was incorrect. The Phase I model flow path is correct, but the velocity is the main concern of the Phase II model.
        - DOE has more than ten wells drilled and being sampled down gradient from ER-EC-11 and throughout Oasis Valley
- **Work Element 3 – Water Chemistry Monitoring and Work Element 4 – Water Level Monitoring**
    - Benefits
        - In addition to benefits listed in Work Element 1, water chemistry data assists in building model confidence
    - Risks
        - Same as Risks listed for Work Element 2
- **Work Element 5 – Data Management, Analysis, and Reporting**
    - Benefits
        - Reporting of data can be referenced in modeling documentation if meets FFACO and Quality Assurance requirements
    - Risks
        - Characterization data needs to be applied to models during development
        - Duplicative efforts
        - Data and database owner concern
- **Path Forward**
    - DOE HQ responsible for process of determining if/how proposal implemented
    - NSO will provide technical input
    - NSSAB recommendation will be transmitted to DOE HQ for consideration when determining path forward

In response to board questions/comments, the following clarifications were provided:

- The Nye County proposed wells are all located on BLM property.

- The Nye County proposal is for a period of three to four years, but would monitor the wells for as long as funding allowed.
- With a 50-year projection, even with no contamination present, information can be collected about the geology and groundwater movement through Nye County's proposed wells which could lead to a better understanding of the flow system and a better model.
- Data can be shared as long as it is permissible to release. Current DOE geochemistry data is not publicly releasable, but it can go through the procedures to be made publicly releasable.
- A regional model is in existence that was a collaborative effort and is used by multiple agencies.

NSSAB Discussion and Path Forward

Member Goldsmith moved to accept Nye County's proposal and recommend to DOE. The motion was seconded and was rejected.

Member Michael Moore moved to make a recommendation that DOE not accept Nye County's proposal. The motion was seconded and was rejected.

Following further discussion, Member Thomas Fisher moved to provide DOE with a letter identifying the items listed below as points of consideration recommended by the NSSAB. The motion was seconded and passed unanimously.

There were a number of items that board members agreed upon:

- Members supported a modified plan
- Development of a modified plan should be a joint effort between DOE and NWRPO
- Long-term funding would be needed if DOE supported the proposal
- A formal Cost/benefit analysis should be conducted
- Over all concern NWRPO underestimated cost of the work
- NWRPO should be involved in DOE's groundwater characterization program and have access to data

The following items were identified as benefits of the proposal by the NSSAB:

- All additional data points collected by NWRPO would be usable by DOE
- A better understanding of the geology would be gained through collaboration with NWRPO
- Data may be less expensive for NWRPO to collect
- Additional monitoring of water flowing toward Beatty, Nevada, would be useful and valuable
- Funding the proposal would provide employment in Nye County
- Existing models could be enhanced and a better understanding of potential contaminant travel times
- Data collected during the activities could be a valuable resource in the future

- Involving Nye County would increase credibility of past and ongoing DOE efforts in the community
- Drilling will only get more expensive if deferred

The following items were identified as concerns by the NSSAB:

- DOE already has a constrained budget
- Identified project life (three-four years) is not long enough
- Nye County's placement of wells is not appropriate to detect contamination
- Data analysis may be redundant and not conducted appropriately
- Wells already exist in these areas
- Additional wells not needed in Frenchman Flat
- Efforts may be duplicative of work already being conducted
- Who would be responsible for long-term maintenance of wells

The NSSAB Office was tasked with drafting a letter based on this recommendation and prepare it for final review and vote at the January 16, 2013 NSSAB Full Board meeting.

U-233 Waste Update *(Scott Wade, DOE)*

- A three day practice session involving an empty cask completed in November 2012
- Implementation of the shipment campaign in 2013

Work Plan Item #2
Industrial Sites-Closing Use Restriction Sites and Long-Term Monitoring *(Tiffany Lantow, DOE)*

- **Objective**
  - Provide NSSAB with information on cost/benefit analysis regarding potential removal of Use Restrictions (URs) at seven Industrial Sites Corrective Action Sites (CASs)
  - Solicit recommendation from NSSAB on conclusions of cost/benefit analysis
- **Background**
  - In March 2012, NSSAB's input was solicited on removal of URs at 37 sites (NSO proceeding with this effort)
    - Removal required only paperwork review
    - Benefits were clearly shown to outweigh costs
  - Seven additional sites identified where the removal decision is more difficult due to the cost/benefit of removal is not as obvious and field work may be required
    - Some sites not entered because of safety or other concerns
    - More information has been obtained about typical hazards at these sites
    - May be beneficial to lift some URs based on new knowledge
- **Assumptions**
  - Estimated costs accurate
  - Hazards at each site not greater than currently understood
  - Any removal of URs require NDEP approval
- **CAS 06-04-01, Decon Pad Oil/Water Separator (OWS)**
  - Proposed activities for UR removal

        - Attempt to remove UR based on paperwork review/documentation and NDEP concurrence (conceptual cost: $5,000)
          OR
        - Excavate separator and pipe/dispose of water; collect verification soil samples below excavation (conceptual cost: $192,000)
    - Recommendation
        - Because there are no contaminants of concern and OWS grouted and does not present safety hazard, recommend pursuing UR removal using paperwork option; if that not possible, retain UR
- **Bunkers (CASs 01-34-01, 02-34-01, 03-34-01)**
    - Proposed activities for UR removal (conceptual cost: $180,000--$60,000 per bunker)
        - Open/enter bunkers, complete visual survey, and obtain samples as necessary
        - Remove any waste and obtain verification samples
    - Recommendation
        - Bunkers no longer assumed to be contaminated based on knowledge gained over course of Industrial Sites Activity
        - Recommend opening bunkers and attempting to remove URs
- **Hydraulic Oil Spills (CASs 25-25-07, 25-25-08)**
    - Proposed activities for UR removal (conceptual cost: $5,000)
        - Lift UR by showing no hazardous impact to environment
            - Hydraulic does not contain Polychlorinated Biphenyls
            - No pathway to exposure for total petroleum hydrocarbons in tunnels
    - Recommendation
        - Recommend pursuing UR removal using paperwork option; if not possible, retain UR
- **CAS 02-02-03, Underground Storage Tank (UST) 2-300-1**
    - Proposed activities for UR removal
        - Attempt to remove UR based on paperwork review/documentation and NDEP concurrence (conceptual cost: $5,000)
          OR
        - Conduct additional sampling; potentially excavate soil/disposal of waste; collect verification soil samples (conceptual cost: $50,000 includes sampling, not excavation/disposal)
    - Recommendation
        - Recommended pursuing UR removal using paperwork option; if not possible, retain UR
- **NSSAB Recommendation**
    - Cost/benefit analysis with DOE recommendations included in meeting packet
    - DOE solicits a recommendation from the NSSAB on:
        - Does NSSAB concur with DOE's conclusions for each site?
        - Does NSSAB identify any opportunities for enhancement?

Member Edward Rosemark moved to accept the DOE recommendation for CAS 06-04-01. The motion was seconded and passed unanimously.

Member Rosemark moved to accept the DOE recommendation for CAS 01-34-01. The motion was seconded and passed unanimously.

Member Fisher moved to accept the DOE recommendations for the five remaining CASs. The motion was seconded and passed unanimously.

The NSSAB Office was tasked with drafting a letter based on this recommendation and prepare it for final review and vote at the January 16, 2013 NSSAB Full Board meeting.

<u>Other NSSAB Business</u> *<u>(Kathy Bienenstein)</u>*

- EM SSAB Chairs' Meeting Update – October 2-3, 2012 in Washington D.C.
    - Chair Bienenstein and Vice-Chair Hruska attended
    - Chair Bienenstein's presentation included information regarding NNSS vital role in the DOE Complex as a waste disposal facility, but receives smallest environmental cleanup budget based on level of risk, not equity
    - Letters generated during EM SSAB Chairs' meeting included in member packets:
        - Letter #1~Supports Waste Isolation Pilot Plant mission be assessed for possible expansion
            - Member Moore moved to endorse letter. The motion was seconded and passed unanimously.
        - Letter #2~Addresses the disposal of DOE high-level waste
            - Member Goldsmith moved to decline endorsing letter as high-level waste is outside the NSSAB's purview. The motion was seconded and passed unanimously.
        - Letter #3~Recommends that DOE not constrain funding related to technology research and development
            - Member Goldsmith moved to endorse letter. The motion was seconded and passed unanimously.
        - Letter #4~Recommends DOE place more priority and emphasis on evaluating technologies that make recycling excess materials cost effective
            - Member Goldsmith moved to endorse letter. The motion was seconded and passed unanimously.
    - NSSAB Sponsored EM SSAB Draft Recommendation Letter
        - Recommendation to DOE to create an annual work plan (focus areas) that will be presented by Chair Bienenstein for EM SSAB consideration at April National Chairs' Meeting in Hanford, Washington
        - Member Fisher moved to accept letter. The motion was seconded and passed unanimously.
- Transportation Working Group (TWG) Meeting Update-November 16
    - NSSAB members to contact NSSAB Office if interested in participating in future TWG meetings
- NNSS Tour Update-November 14
    - Members had opportunity to visit locations included in FY 2013 Work Plan
    - FY 2013 Work Plan with tour photos of work plan sites provided in member packets

The next Full Board meeting will be held on Wednesday, January 16, 2013, at 5 p.m. at the National Atomic Testing Museum. Briefing planned for Work Plan Item #5, FY 2015 Baseline Prioritization.

Board members assessed the meeting. There was a common theme that the Board appreciated hearing presentations from both NWRPO and DOE regarding the Nye County Drilling Proposal, and felt that the lively level of discussion that resulted was meaningful. They appreciated the opportunity to provide valuable input.

Member Goldsmith moved the meeting be adjourned. The motion was seconded and passed unanimously.

Meeting adjourned at 9:24 p.m.