



Nevada Site Specific Advisory Board (NSSAB)

Full Board Meeting

**Frank H. Rogers Science and Technology Building
755 East Flamingo, Las Vegas, NV
4:00 p.m. – November 7, 2018**

- Members Present:** Amina Anderson, Frank Bonesteel (Chair), William DeWitt, Karen Eastman, Pennie Edmond, Charles Fullen, Dick Gardner, Anthony Graham, Tanya Henderson, Hepburn Klemm, Donald Neill, Steve Rosenbaum (Vice-Chair), Janice Six, Richard Stephans, Richard Twiddy, Dina Williamson-Erdag, Connie Wissmiller
- Members Absent:** Raymond Elgin
- Liaisons Present:** Chris Andres (State of Nevada Division of Environmental Protection [NDEP]), Richard Friese (U.S. National Park Service [NPS]), Phil Klevorick (Clark County), John Klenke (Nye County Nuclear Waste Repository Project Office [NWRPO]), Scott Lewis (Nye County Emergency Management [NCEM]), Delon Winsor (Esmeralda County Commission)
- Liaisons Absent:** Richard Arnold (Consolidated Group of Tribes and Organizations [CGTO]), Nathan Katschke (Lincoln County Commission), Dan Schinhofen (Nye County Commission)
- Department of Energy (DOE):** Robert Boehlecke, Tiffany Gamero, Kelly Snyder (Deputy Designated Federal Officer [DDFO]), Bill Wilborn
- Facilitator:** Barb Ulmer (Navarro)
- Contractors/Government:** Kelli Anderson (State of Nevada Division of Emergency Management [NDEM]), Marilew Bartling (Navarro), Patty Hardesty (Mission Support and Test Services [MSTS]), Marc Klein (Navarro), Patrick Lazenby (NCEM), Randall Paylor (US Geological Survey [USGS]), Ken Rehfeldt (Navarro), Chuck Russell (Desert Research Institute [DRI]), Jeffrey Sanders (USGS), Lee Stevens (Navarro)
- Public Signed In:** Bill Stremmel (Pahrump, NV)

Open Meeting/Chair's Opening Remarks

Chair Frank Bonesteel welcomed everyone to the meeting and recognized the six new members attending their first official meeting. Following the Chair's opening remarks, Member Charles Fullen moved to approve the agenda as presented. The motion was seconded and passed unanimously.

Public Comment

The following public comment was provided by Bill Stremmel from Pahrump, NV, member of the Town of Pahrump: Nuclear Waste & Environment Advisory Committee and member of the Advisory Board to the U.S. Nuclear Energy Foundation:

I was not surprised to hear the news that plutonium is to be transferred from the Savannah River Site into the "Nevada National Security Site", because that was the other shoe to drop after DOE threw in the towel on the MOX facility. Nevada politicians now have a lot of egg on their face if, after 35 years of chest-pounding opposition to the centralized repository under Yucca Mountain, weapons-grade plutonium is to be moved over our public highways into ersatz arrangements at the test site with no project – no public work – and no infrastructure plums to show for it. And Las Vegas should not feel smug if the trucks are bypassing the Strip because either the 215 or I-15 will be included in the journey that will also run on Blue Diamond adjacent to a fast growing area where hundreds of thousands of residents live.

There never has been a public referendum on Yucca Mountain in Nevada. We've been told that because of Harry Reid's obsession with stopping this project, that it must be bad for us. It comes down to a matter of semantics, because every time Yucca comes up there is a knee-jerk NIMBY opposition to "**THE** dump." But what we have out there now is "**A** dump". I know that what DOE is doing under your purview is much more than putting lipstick on a pig. Their efforts and your oversight are admirable. But where the plutonium is going is into "A dump", and so the broken record is not playing so loudly now, and may be totally ineffective.

Any student of the United States Constitution knows that there is no negotiating the Commerce or Supremacy clauses. They are absolute, and without a **P R O J E C T** to mediate over, Nevada has no leverage over the federal government. My discussions with local officials, state bureaucrats below the titular heads in Carson City, and even the Las Vegas Mayor's Office reveal increasing frustration with obstinacy of our federal Senators and Representatives, and the Governor. Their continuing refusal to deal with the federal government places their constituents at even greater peril, and leaves our water and transportation infrastructure in a parlous state.

A centralized repository under thousands of feet of bedrock with rail connections from the north and east to eliminate over-the-road movement of all radioactive waste, and a pipeline to desalinate water out of the ocean as a mitigation measure for past contamination and any possible future risk is far more than a "dump". It is a project that could leverage a comprehensive rationalization of all hazardous materials around Southern Nevada, with protocols over what future shipments would be accepted into the site under your responsibility.

U.S. DOE Update (Robert Boehlecke, DOE)

Mr. Robert Boehlecke opened that the budget for DOE was passed as part of the Energy and Water, Legislative Branch, and Military Construction and Veterans Affairs Appropriations Act, 2019, in September 2018. The Environmental Management (EM) Nevada Program received just over \$60 million for fiscal year (FY) 2019 and is operating under 30-day allotments for the first quarter. This funding is sufficient to accomplish all scheduled EM activities at the Nevada National Security Site (NNSS) for FY 2019.

Mr. Boehlecke updated that remediation of contaminated soil and debris, which includes excavation, packaging, and shipment, continued at Clean Slate III. Notification of shipments was made to Nye County and Esmeralda County Emergency Management. It is estimated that the project will require approximately 450 shipments utilizing the same shipping route as Clean Slate II. The first shipment arrived at the NNSS on October 1, 2018. To date, the number of shipments completed is 80 with a total of 160 bags disposed at the Area 3 Radioactive Waste Management Site (RWMS). Utilizing the Area 3 RWMS increases efficiencies as it will assist in the final closure by filling the subsidence craters and the turn-around for the trucks is shorter than the Area 5 Radioactive Waste Management Complex (RWMC).

Mr. Boehlecke commented that work continues on an expansion of the western portion of the Area 5 RWMC for future waste disposal. A water line relocation is scheduled to be completed in November 2018. Construction of the first two segments of a flood control berm is expected to be completed in December 2018. Each berm segment is 2,000 linear feet.

Mr. Boehlecke reminded the Board that he has provided updates for over a year at NSSAB meetings regarding a Finding of Alleged Violation issued to the NNSS by NDEP due to a generator shipping waste containers containing mixed low-level waste (MLLW) that were mischaracterized as LLW. On August 3, 2018, NDEP issued a letter to the National Nuclear Security Administration/Nevada Field Office (NNSA/NFO) that documented acceptance of the final Corrective Action Plan (CAP). This letter further required that four corrective actions described in the CAP be completed by December 31, 2018, as follows: CAP Action #1 - In October 2018, training was conducted in accordance with the CAP for contractor and Federal staff. NDEP observed this training. This week, Radioactive Waste Acceptance Program (RWAP) staff from the NNSS conducted training for personnel at the violating generator site. CAP Action #2 – Incorporate training for auditors into the RWAP qualification process has been completed. CAP Action #3 – Revision of procedures is progressing with one of two procedures revised and issued and the second procedure revised and in review prior to issuance. CAP Action #4 – Provide memo guidance to DOE waste generating sites is in internal review and is expected to be transmitted soon. NDEP, NNSA/NFO and the EM Nevada Program have discussed the scope and cost of a Supplemental Environmental Project (SEP) that would be undertaken in lieu of paying a penalty. A document entitled *Proposed Supplemental Environment Project* was formally transmitted to NDEP on October 18, 2018, for approval and incorporation into a formal Administrative Settlement Agreement. Once reviewed and approved by NDEP, the formal Agreement will be signed that will include additional deadline dates.

Mr. Boehlecke stated that the current Environmental Program Services contract with Navarro to conduct Environmental Restoration and RWAP activities will expire in January 2020. The process to identify a new contractor was initiated with the draft Request for Proposal (RFP) announcement on July 26, 2018. During the week of August 13, 2018, the EM Nevada Program held an Industry

Day for potential bidders and one-on-one sessions to collect input from industry to consider for the final RFP. DOE is preparing the final RFP that is expected to be released in the coming months.

Mr. Boehlecke continued that the EM Nevada Program is working with EM Headquarters (HQ) to be included in the development of the communication plans for the public for any Environmental Impact Statements that include the NNSS as a potential location for LLW disposal.

Mr. Boehlecke reported that the Atomic Energy Commission, predecessor agency to DOE, funded construction and research conducted for the Southwest Experimental Fast Oxide Reactor (SEFOR) until 1972. At that time, reactor fuel was removed and sent to the Savannah River Site. The University of Arkansas assumed ownership in 1975 and used the SEFOR as an instrument calibration and research location until 1986. The university worked with DOE/EM HQ to secure funding through a grant for a portion of the decontamination and decommissioning (D&D) for the reactor facility and the disposal of LLW. The reactor vessel and components (not the reactor or reactor fuel) destined for disposal at the NNSS is predominantly contaminated by activated metals, including isotopes of nickel, cobalt, and niobium. There are no fission products, transuranic activity, or significant loose surface contamination. Other associated D&D waste is being disposed at a commercial facility in Utah.

The SEFOR waste profile was conditionally approved in June 2018, but the generator could not proceed until a formal transportation plan was submitted and approved. The EM Nevada Program recently received this transportation plan that is currently under review. As part of the transportation plan, it is anticipated that the transporter will be required to obtain Nevada permits for this oversize/overweight shipment. Due to its size and weight, the one large component will have one tractor to push and one to pull; therefore, the shipment will have special requirements in order to travel over public highways. The Navarro RWAP Transportation Subject Matter Expert will be onsite during loading in Arkansas and will perform due diligence review of the motor carrier on the day of shipment, observe marking, labeling, loading, placarding, and load securement, monitor shipper/carrier interface, and ensure that applicable permits are in place.

Mr. Boehlecke remarked that it is the EM Nevada Program continued commitment to stakeholders to communicate unique waste streams prior to waste acceptance. EM Nevada Program is working with NDEP to implement policies and procedures to improve communication of unique waste streams to stakeholders prior to being made public in the media.

Specifics on the SEFOR: Barnhart Crane and Rigging Company is the motor carrier. There will be two drivers and two escorts, and some state permits will also require police escort. The anticipated routing is from Arkansas, Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona, California, to Nevada. In Nevada, the shipment will enter via CA-127 to I-15 to NV-373 at Amargosa Valley, NV to US-95 to Mercury, NV. The routing is according to overweight and over dimensional state permits and subject to change. Travel restrictions include daytime transport only. The estimated transit will depart Arkansas in late November 2018 and arrive at the NNSS in early December 2018. Since the SEFOR shipment is of interest to stakeholders, the EM Nevada Program will work with the generator and EM HQ on a communication plan for further notifications that meet the needs of stakeholders, including emergency managers, first responders, community residents, NSSAB, etc. All shipments to the NNSS by generator and routes taken are reported quarterly and are available at <http://nnss.gov/pages/programs/RWM/Reports.html>

Mr. Boehlecke conveyed to the Board that the EM Nevada Program made a commitment with the State of Nevada about twenty years ago that waste shipments to the NNSS would not travel through the I-15/US-95 interchange, over Hoover Dam, or over the Mike O'Callaghan-Pat Tillman Memorial Bridge. This requirement is in the NNSS Waste Acceptance Criteria (WAC), a document that all generators must follow in order to ship waste to the NNSS. This past Sunday, a driver traversed the Bridge as the load was state-permitted and instructed to follow this route. The driver notified the NNSS upon arrival that he had traversed the Bridge. As this is a violation of the NNSS WAC, the EM Nevada Program issued a Finding to the generator. The generator will be required to conduct a root cause analysis to identify the reason for the violation, and the generator will then submit a CAP. The RWAP will verify that the generator follows through with its corrective actions. The cause of the event is still under investigation. The EM Nevada Program is looking at ways to reduce the potential for this type of event to occur in the future. An alert was issued to all NNSS-approved generators to ensure routing directions provided under state-issued permits align with the NNSS WAC-approved routes. If they do not align, generators are required to contact the permitting state to reroute or contact the EM Nevada Program to intervene. The EM Nevada Program will also be reviewing generators driver's instructions for clarity in regard to requirements and reaching out to the permitting authorities to ensure they have accurate information regarding routing of waste shipments to the NNSS.

Mr. Boehlecke reminded the Board that they received an email from the NSSAB Office on October 10, 2018, that DOE is seeking public comment through a *Federal Register Notice* (FRN) on its interpretation of the statutory term "high-level radioactive waste." The 60-day comment period is open until December 10, 2018. At this time, DOE is not making any decisions on the classification or disposal of any particular waste stream.

Mr. Boehlecke mentioned recent events/stakeholder meetings that were conducted by EM Nevada Program staff:

- September 27, 2018 – Pahrump Valley High School tour of the NNSS
- October 16, 2018 – Community Conversations in Amargosa Valley and Beatty, NV
- November 7, 2018 – LLW Stakeholder Form (LLWSF)

Mr. Boehlecke noted upcoming presentations/meetings/conferences of interest to be conducted/attended by the EM Nevada Program:

- Week of November 12, 2018 – annual EM HQ hosted Intergovernmental Meeting in New Orleans, LA
- November 15, 2018 – Clean Slate III update presentation to Nye County Local Emergency Planning Committee in Pahrump, NV
- November 16, 2018 – Career day presentation at Gibson Elementary School in Las Vegas, NV
- Week of November 26, 2018 – presentation at Perma-fix Nuclear Waste Management Forum in Nashville, TN
- December 4-6, 2018 – presentation at Government to Government Technical Information Exchange Meeting on Near Surface Disposal Facilities in Knoxville, TN

Mr. Boehlecke concluded that the public comment received earlier in the meeting did not relate to EM activities, although the comments will be relayed to the NNSA/NFO.

Liaison Updates

Clark County (*Phil Klevorick*)

Liaison Phil Klevorick queried the NSSAB whether it plans to provide comments to the FRN on its interpretation of the statutory term “high-level radioactive waste” that Mr. Boehlecke mentioned in his update. Liaison Klevorick attended the LLWSF earlier today, and he thanked the NNSA/NFO for also participating as it is important for the emergency managers in the region to have an understanding and hear a clear voice of consistency, as familiarity is important. Liaison Klevorick noted that it is important for LLWSF attendees be made aware of any unique waste streams in route to the NNSS. Liaison Klevorick concluded that he was appointed to the Clark County School District (CCSD) Science, Technology, Engineering, and Mathematics (STEM) board. The CCSD is conducting a pilot project at the Lied Middle School in North Las Vegas, NV. The students selected for this project are choosing their pathways in grade six, whether it be construction management, science, robotics, engineering, etc. There are opportunities for strategic partnerships, financial support, and mentoring students. Mr. Klevorick noted a STEM project that Par 3 designed a miniature golf course at the school. Every year, the students vote on one of the holes to be redesigned for the next year as a class project. The school has been contacted by several other states regarding this venture. Liaison Klevorick welcomed anyone interested in more information on the STEM project to talk to him offline. Member Richard Twiddy was encouraged by this endeavor and offered his assistance in schools in eastern Clark County.

Esmeralda County Commission (*Delon Winsor*)

Liaison Delon Winsor reported that plans for the establishment of a mine in Esmeralda County is nearing completion. During building of the mine, the highway will be relocated; so there will be construction on the roadways around Goldfield, NV.

NCEM (*Scott Lewis*)

Liaison Scott Lewis related that transportation routes are a regular topic of conversations that occur within the citizenry of Pahrump, NV. Nye County has many construction projects currently undergoing, including the State Route (SR) 160 pass and corridor. Liaison Lewis added that they have addressed the Clean Slate III shipments and disseminated the information to the appropriate emergency managers. There has been a common concern in the community with the parking of waste trucks at local casinos going through Pahrump, NV to the NNSS. The NCEM is gathering as much information as possible and sharing with all pertinent partners regarding this issue. Liaison Lewis concluded that the EM Nevada Program will be presenting at the Nye County Local Emergency Planning Committee on November 15, 2018.

NWRPO (*John Klenke*)

Liaison John Klenke reported that Nye County is sampling wells for the last quarter FY 2018 under the Tritium Sampling and Monitoring Program. Most of the difficult wells have been sampled that required a portable pump. Last week, Liaison Klenke and a DOE contractor visited well sites to determine the maximum utility in an effort to include in the DOE integrated sampling program.

NDEP (*Chris Andres*)

Liaison Chris Andres stated that she will be reviewing the SEP that Mr. Boehlecke briefed during his update. The SEP will be included in a Settlement Agreement that both parties will sign as a legal binding agreement that commits DOE to completing the SEP. The SEP is in lieu of monetary payments, as it is NDEP’s intent to support programs/projects benefitting all parties, whenever possible. Liaison Andres continued that NDEP supported reopening the Area 3 RWMS

for Clean Slate III in an effort to fill the facility and properly close. She will be attending the Intergovernmental Meeting next week in New Orleans, LA. As part of this conference, Liaison Richard Arnold and she will be attending the State and Tribal Government Working Group meetings, and she will also attend meetings for the National Governors Association Task Force as a state representative. The FRN on its interpretation of the statutory term “high-level radioactive waste” will be a subject of at least two different panels during the Intergovernmental Meeting. Since Nevada elected a new governor last week, NDEP may request an extension for public comment with the transition to new leadership. Liaison Andres suggested that the NSSAB could consider requesting an extension for public comment.

NPS (*Richard Friese*)

Liaison Richard Friese commented on a recent tractor/trailer accident on California SR 190 at Towne Pass, a stretch of road in Death Valley National Park that can be treacherous with its deep grades and sharp curves. Although it is a shorter route in mileage and time from U.S. Route 395 in California to U.S. Route 95 in Nevada, park managers are concerned with the increase of truck accidents utilizing this route due to the road conditions and the law enforcement presence is light on that stretch of road. Liaison Friese added that prior to this incident there was a hazmat spill involving a tanker in route to U.S. Ecology. In this case, the driver intended on taking a route that was not permitted by the U.S. Department of Transportation.

Emergency Preparedness Working Group (EPWG) Overview (*Kelli Anderson, NDEM*)

- **Vision, Mission, Core Values**
 - Department of Public Safety (DPS) Vision: To be a unified multi-discipline and total force organization that will provide excellent public safety services and will be known for our abilities and resource capabilities to “to take care of business” anywhere and anytime in the State of Nevada
 - DPS Mission: In partnership with the people of Nevada, the DPS provides services in support of protecting our citizens and visitors by promoting safer communities through prevention, preparedness, response, recovery, education, and enforcement
 - DPS Core Values: Integrity, Excellence, Courage, Accountability, Leadership, and Teamwork
- **Agency Overview**
 - NDEM serves as the State of Nevada’s coordinator of resources before, during, and after declared and non-declared emergencies and disasters within the state
 - Nevada’s emergencies and disasters can be man-made (acts of terrorism, for example) or natural (fires, floods, and earthquakes, for example), and NDEM’s role is to ensure communities across the state have the capacity to prepare for, respond to, and recover from each
- **EPWG Purpose**
 - The purpose of the EPWG is to provide a forum for coordination of the LLW program between the NNSS, NDEM, and the counties of Clark, Elko, Esmeralda, Lincoln, Nye, and White Pine
 - The purpose of the grant program is to provide assistance to the counties located along the LLW transportation routes in Nevada in developing an operational level emergency response capability
- **EPWG Mission**
 - Working Group objectives include:

- Grant administration coordination, including development of grant guidelines, standardization of grant applications and reporting requirements, and coordination on other crosscutting grant administrative issues
- Coordination of multi-county initiatives such as equipment standardization, enhancement of communication systems, and training development and conduct
- Concurrence on the NNSG grant funding distribution
- Coordination of NNSG equipment grants to the six counties
- As a committee, the EPWG promotes activities that contribute in a meaningful way toward building disaster resistant communities in the State of Nevada

- **EPWG Membership**

- Clark County
- Elko County
- Esmeralda County
- Lincoln County
- Nye County
- White Pine County

- **FY EPWG 2013 – Current**

TOTAL GRANT AWARDS FFY13-FFY18	\$ 3,430,797.38
TOTAL SPENT TO DATE FFY13-FFY18	\$ 2,552,384.53
BALANCE REMAINING FFY13-FFY18	\$ 878,412.85
TOTAL % SPENT	71%

- **FY 2013**

FY13	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 50,500.07	\$ 50,500.07	\$ -	100%
Elko County	\$ 71,636.00	\$ 71,320.49	\$ 315.51	100%
Esmeralda County	\$ 116,470.17	\$ 99,739.98	\$ 16,730.19	86%
Esmeralda County	\$ 6,000.00	\$ 6,000.00	\$ -	100%
Lincoln County	\$ 111,150.17	\$ 111,150.17	\$ -	100%
Nye County	\$ 127,969.67	\$ 127,969.67	\$ -	100%
White Pine County	\$ 84,779.99	\$ 84,779.99	\$ -	100%
Total	\$ 568,506.07	\$ 551,460.37	\$ 17,045.70	97%

- **FY 2014**

FY14	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 29,986.62	\$ 29,986.62	\$ -	100%
Elko County	\$ 33,000.00	\$ 33,000.00	\$ -	100%
Esmeralda County	\$ 106,840.00	\$ 100,650.49	\$ 6,189.51	94%
Lincoln County	\$ 121,620.00	\$ 121,620.00	\$ -	100%
Nye County	\$ 87,840.00	\$ 87,840.00	\$ -	100%
White Pine County	\$ 120,700.00	\$ 110,959.87	\$ 9,740.13	92%
NDEM EPWG	\$ 28,600.00	\$ 20,525.92	\$ 8,074.08	72%
Total	\$ 528,586.62	\$ 504,582.90	\$ 24,003.72	95%

- **FY 2015**

FY15	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 104,093.30	\$ 103,894.03	\$ 199.27	100%
Elko County	\$ 69,000.00	\$ 66,557.69	\$ 2,442.31	96%
Esmeralda County	\$ 91,000.00	\$ 79,583.50	\$ 11,416.50	87%
Lincoln County	\$ 149,376.75	\$ 149,376.75	\$ -	100%
Nye County	\$ 105,328.84	\$ 105,328.84	\$ -	100%
White Pine County	\$ 115,861.61	\$ 113,298.61	\$ 2,563.00	98%
Total	\$ 634,660.50	\$ 618,039.42	\$ 16,621.08	97%

- **FY 2016**

FY16	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 132,000.00	\$ 57,025.34	\$ 74,974.66	43%
Elko County	\$ 91,870.00	\$ 88,895.15	\$ 2,974.85	97%
Esmeralda County	\$ 98,000.00	\$ 59,557.30	\$ 38,442.70	61%
Lincoln County	\$ 141,114.42	\$ 97,401.78	\$ 43,712.64	69%
Nye County	\$ 101,600.00	\$ 101,600.00	\$ -	100%
White Pine County	\$ 203,860.00	\$ 188,407.44	\$ 15,452.56	92%
Total	\$ 768,444.42	\$ 592,887.01	\$ 175,557.41	77%

- **FY 2017**

FY17	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 80,000.00	\$ 67,378.88	\$ 12,621.12	84%
Elko County	\$ 47,927.00	\$ 41,273.57	\$ 6,653.43	86%
Esmeralda County	\$ 46,000.00	\$ 23,313.06	\$ 22,686.94	51%
Lincoln County	\$ 78,685.03	\$ 46,370.33	\$ 32,314.70	59%
Nye County	\$ 77,000.00	\$ 61,524.55	\$ 15,475.45	80%
White Pine County	\$ 113,199.57	\$ 45,554.44	\$ 67,645.13	40%
DEM	\$ 20,000.00	\$ -	\$ 20,000.00	0%
Total	\$ 462,811.60	\$ 285,414.83	\$ 177,396.77	62%

- **FY 2018**

FY18	Total Award	Spent to Date	Balance	% Spent
Clark County	\$ 92,300.00	\$ -	\$ 92,300.00	0%
Elko County	\$ 79,650.00	\$ -	\$ 79,650.00	0%
Esmeralda County	\$ 91,000.00	\$ -	\$ 91,000.00	0%
Lincoln County	\$ 92,838.17	\$ -	\$ 92,838.17	0%
Nye County	\$ 92,000.00	\$ -	\$ 92,000.00	0%
White Pine County	\$ -	\$ -	\$ -	
DEM	\$ 20,000.00	\$ -	\$ 20,000.00	0%
Total	\$ 467,788.17	\$ -	\$ 467,788.17	0%

- **Priorities**

- *Strengthen emergency preparedness and resiliency*
- *By 2018, align Nevada’s emergency management vision with the “100 Resilient Cities Initiative” to develop innovative methods for coordinating preparedness, response, recovery, and mitigation during emergencies and disasters*
- *Align existing resources to build statewide capacity to respond to and recover from man-made or natural emergencies and disasters, focusing especially on Cyber Security*
- *Apply new technologies such as Unmanned Aerial Vehicles in a way that better prepares the state’s response capabilities to maximize emergency and disaster resiliency in the new Nevada*
- *Establish a statewide food security preparedness infrastructure that includes sustainable agricultural resources*

- **How NDEM Supports EPWG with the Agreement in Principle (AIP)**

- NDEM will be the lead agency for all EPWG activities, to include review and approval of the annual work scope and funding provided to the counties
- DOE reserves the right to approve or remove any item from the proposed scope of work for each FY

- **Grant Process**

- Funding received by modification and amount
- NDEM holds modification to grant 1 year of funding at a time
- NDEM requests grant applications

- Narrative and budgets
- All applications are vetted by members in Open Meetings in compliance with Nevada law
- Grant requested reviewed and voted by allocation and priority
- NDEM issues sub-grants
- **Examples of Equipment**
 - Gas/petrol duo pump – Clark County - FY 2017 - 2 at \$7,602
 - Combi tool – Clark County - FY 2017 – 1 at \$4,723
 - Drone package – Elko County - FY 2017 – 1 at \$8,191
 - Night scan LED lamps for night scan towers – Elko County - FY 2017 – 1 at \$9,995
 - Turnout gear – Esmeralda County – FY 2012 - \$20,480
 - Power load system – Esmeralda County – FY 2013 – 1 at \$19,623
 - Ambulance – Esmeralda County – FY 2014 - \$51,840
 - Automatic external defibrillator – Lincoln County – FY 2014 – 35 at \$1,388 = \$49,966
 - Coach ambulance – Lincoln County – FY 2015-2016 – 1 at \$150,500
 - Generator – Lincoln County – FY 2015 – 1 at \$23,500
 - Beatty ambulance barn - Nye County
 - Ram truck – Nye County – FY 2015 - \$34,876
 - Standby diesel generator – Nye County – FY 2016 - \$19,000
 - Survey meter for Nuclear Medicine Applications – White Pine County – FY 2013 – radiation emergency response kits – 4 at \$1,972 = \$7,888
 - Copy machine – White Pine County – FY 2014 - \$8,971
 - Radiation detector – White Pine County – FY 2014 - \$13,411
- **Resilience Plan**

Statewide Resilience Strategy and Legislative Recommendations to the Nevada Commission on Home Security – June 30-July 1, 2018
- **Questions**

Kelli Anderson, Emergency Management Programs Manager, Grants, Recovery and Mitigation, 775-220-1618, kanderson@dps.state.nv.us

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

- The funding for the EPWG grant is provided by DOE based on \$0.50 per cubic foot disposed for all waste disposed at the NNSS. Since FY 2000, \$15.7 million has been distributed to the counties through the EPWG grant. There are two separate funding streams for EPWG: one for the grant that 100% of the funding passes through to the local jurisdictions and a separate allocation for personnel costs funds five full-time equivalent employees.
- EPWG grant is distributed to six Nevada counties (Clark, Elko, Esmeralda, Lincoln, Nye, and White Pine) located along transportation routes to the NNSS. EPWG funding is not distributed to counties in surrounding states, such as Inyo County, CA. The State of Nevada does employ a radiation specialist who interfaces and advises local and surrounding state's jurisdictions and ensures that radiological equipment is updated and calibrated.
- NDEM has mutual aid agreements with surrounding states through the Emergency Management Mutual Aid Compact. Internal mutual aid agreements from county to county in Nevada are also in place. Through an emergency management center, NDEM coordinates emergencies with the Nevada Highway Patrol, law enforcement, fire, etc., to most efficiently manage emergency resources.

- NDEM receives EPWG grant awards, usually on a quarterly basis. Through the state budget process, NDEM is given budget authority to pass through the EPWG grants to the local counties. The EPWG meets to determine the needs of the six counties and sets priorities yearly. From these priorities, NDEM develops the grant awards and an agreement is put into place with each of the local counties. The counties purchase needed emergency management items based on these agreements and are then reimbursed through a pass through with the State of Nevada upon providing the required receipts.

Chair Bonesteel inquired whether Liaison Klevorick would elaborate on his question whether the NSSAB intends to provide comments on the FRN on its interpretation of the statutory term “high-level radioactive waste.” Liaison Klevorick reiterated that the deadline for providing comments for this FRN is December 10, 2018, which is prior to the next NSSAB meeting in January 2019. He continued that as an EM advisory board, it is his understanding that it is not within the purview of the Board to make comments on items regarding high-level waste. Although, if changes are made to the classification of certain wastes, there may be potential impacts on future waste streams disposed at the NNSS, which would be in the purview of the NSSAB. Liaison Klevorick noted that an extension for public comment could be requested by the NSSAB, although an extension may not be granted by DOE. As an option, DDFO Kelly Snyder added that individual members may comment on items pertaining to high-level waste as a private citizen. Liaison Andres reminded the NSSAB of its endorsement last spring of an EM SSAB recommendation to the DOE regarding the Energy Community Alliance Report on Waste Disposition that included questions that could be used as potential comments. Member William DeWitt made a motion that the NSSAB request an extension of the deadline for public comment. The motion was seconded and passed unanimously. Chair Bonesteel asked Liaison Andres to share the specific wording that the State of Nevada will be using to request an extension for public comment in order for the NSSAB’s request mirror and not oppose NDEP’s request.

Other NSSAB Business (*Frank Bonesteel, Chair*)

Chair Bonesteel announced that there is an opening for a member to represent the NSSAB at the LLWSF in FY 2019. The LLWSF is a group that meets on a quarterly basis that provides attendees an opportunity to share and discuss information related to the shipment and disposal of LLW at the NNSS. Chair Bonesteel explained that the forum earlier today included a Nevada Department of Transportation construction update, an EM Nevada Program update on transportation and disposal of waste at the NNSS, a Community Environmental Monitoring Program overview, and an NNSS emergency management program overview. The date for the next quarterly LLWSF is not final, although forums are scheduled to coincide with the local emergency planning committee meetings for Clark and Nye Counties, alternating meeting locations between Las Vegas and Pahrump, NV. Members Pennie Edmond, Hepburn Klemm, Janice Six, and Richard Twiddy expressed interest in the position. Chair Bonesteel noted that all four members can attend the LLWSF, although there will only be DOE travel reimbursement available for one member to attend each LLWSF. He continued that the NSSAB Office will send out confirmation emails, and the four members can determine who will be the lead if more than one member is interested in attending. The lead will be tasked with attending, taking notes, and providing a written report to be distributed to the NSSAB.

Chair Bonesteel initiated further dialogue regarding liaison participation from the September 26, 2018 NSSAB work plan development meeting. At the September meeting, Member Twiddy suggested that a potential work plan item could be to provide a recommendation on specific

funding to assist outlying county representatives to fully participate in various EM Nevada Program functions. Initially, the Board could question county representatives to determine what their needs are in the process. The objective would be to provide the liaisons with sufficient knowledge of EM activities in order for them to communicate the information to their constituents. Former Member Cecilia Flores Snyder mentioned that a potential work plan item could be to survey current liaisons for ideas to increase liaison participation, WebEx, Skype, etc. The NSSAB could then make recommendations to DOE on ways to improve liaison participation. In September 2018, it was determined that these suggestions were not necessarily work plan items, although of concern to the NSSAB. Chair Bonesteel asked Member Twiddy if he would chair an ad hoc committee to research these suggestions/concerns and report at the January 16, 2019 NSSAB meeting. Member Twiddy accepted and Member Karen Eastman and Vice-Chair Steve Rosenbaum volunteered to assist on this committee. Member Twiddy will formulate a plan with the committee and report to the NSSAB at the next Full Board meeting in January 2019.

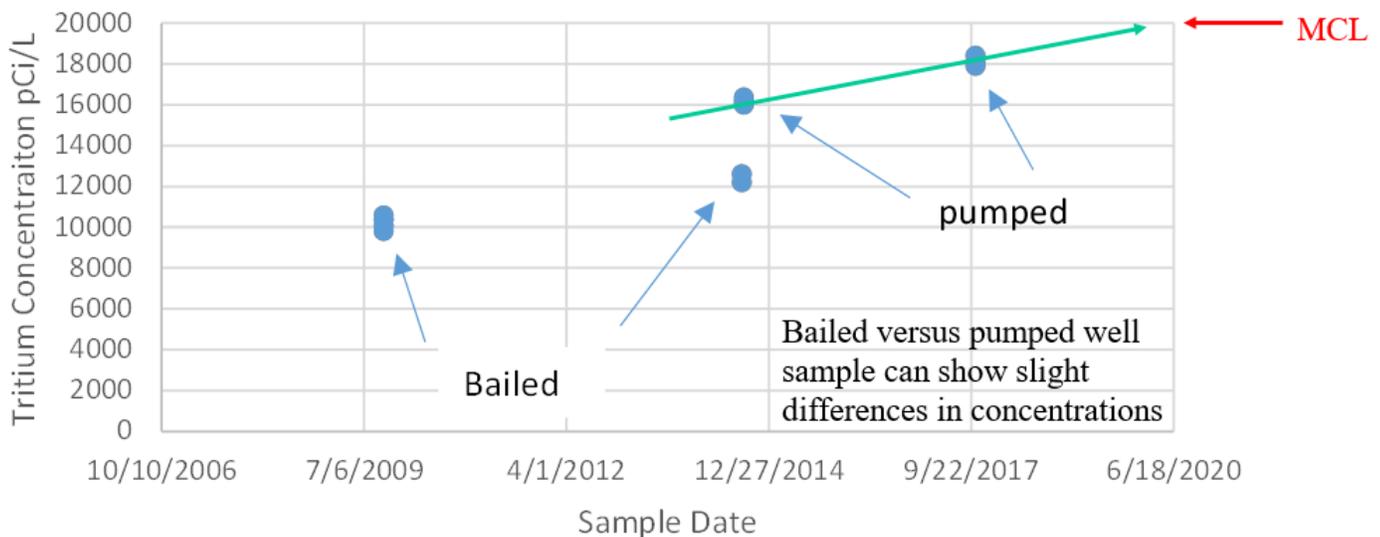
Also at the September meeting, Member Dina Williamson-Erdag brought forward a potential work plan item to discuss the number of liaisons, possible increase in liaison organizations, and identifying organizations in the local communities that represent stakeholders that the NSSAB may want to recommend to DOE as a prospective liaison organization(s). Chair Bonesteel asked Member Williamson-Erdag if she would chair an ad hoc committee to investigate these suggestions/concerns and report at the January 2019 meeting. Member Williamson-Erdag accepted and Members Twiddy and Donald Neill volunteered to assist on this ad hoc committee. DDFO Snyder notified the NSSAB that travel reimbursement was not budgeted for these ad hoc committees. Member Twiddy responded that the work of the committee could be done by phone and email with no travel costs incurred.

Underground Test Area (UGTA) Overview *(Bill Wilborn, DOE)*

- **Historic Nuclear Testing Impacts on the Groundwater**
 - 828 underground nuclear tests conducted at the NNSS from 1951 to 1992
 - Underground tests conducted at depths ranging from approximately 90 to 4,800 feet below the ground surface
 - One-third of these tests occurred near, below, or in the water table
 - Much of the contaminants are trapped in the test cavity
 - Radioactive contamination has not been detected above the Safe Drinking Water Act (SDWA) in groundwater beyond the NNSS and the Nevada Test and Training Range (NTTR)
- **UGTA Activity**
 - Complex geology and hydrology of the NNSS presents unusual challenges in understanding boundary conditions, velocity, and direction of groundwater flow
 - Challenges addressed in UGTA strategy through drilling, well sampling, characterization, and computer model development
 - No practical technology for clean-up
 - Natural processes occur that reduce and remove contamination
- **Why Monitor NNSS Groundwater**
 - Helps protect the public by providing a system of monitoring detection
 - Provides baseline to establish existing conditions
 - Identifies trends and verifies compliance with regulatory standards
- **Corrective Action Units**
 - There are five Corrective Action Units that make up the UGTA activity

- Corrective Action Units are determined by location and geologic conditions
- **Corrective Action Units (CAUs) Standing**
 - Frenchman Flat (CAU 98) – In closure, performing annual groundwater monitoring
 - Yucca Flat/Climax Mine (CAU 97) – In Model Evaluation stage with planned closure in FY 2020
 - Rainier Mesa/Shoshone Mountain (CAU 99) – Completing External Peer Review process to determine whether CAU is ready to move to the next phase of the closure process
 - Central Pahute Mesa (CAU 101) and Western Pahute Mesa (CAU 102) – Conducting Phase II data analysis and evaluation and streamlining the modeling effort based on previous modeling already conducted and real field data observations
- **Groundwater Flow on the NNSS**
 - 60 years of data collected indicate that groundwater:
 - In the eastern portion, eventually discharges to the Ash Meadows/Devils Hole or Death Valley areas
 - In the northwestern portion, locally discharges to springs in Oasis Valley
 - Estimated velocities (speed) range from a few feet up to 300 feet per year dependent on geology, hydraulic properties (i.e., ability of water to flow through rock), and elevation of the water table
 - Model forecasts show contaminants would not reach publicly accessible water supply
- **Key Messages**
 - Current research shows the public water supply is safe from the impacts of historic underground nuclear testing
 - Groundwater contamination affected by historic NNSS activities has not gone beyond restricted Federal land
 - Groundwater models are providing output that is key to enhancing current and developing future monitoring strategies
- **Pahute Mesa Phase II**
 - Groundwater flows from Pahute Mesa (Areas 19 and 20) toward Oasis Valley near Beatty
 - 82 underground tests comprise about two-thirds of radionuclide inventory underground tests conducted on the NNSS
 - Investigations focused on protecting human health and the environment

- **Trend of Tritium Concentrations in Well ER-EC-11**
 - Key Message: Trend is increasing and nearing the maximum contaminant level (MCL)



- **Pahute Mesa**
 - Downgradient wells in Pahute Mesa:
 - 27 wells
 - 54 intervals
 - 1,391 samples since 1995
 - At the current rate of migration, tritium above the MCL will not reach the NTTR boundary
- **Radionuclides Above the MCL: A Benham Plume Perspective**
 - A radionuclide plume is moving south from Benham
 - Measured concentrations from ER-20-5-1 (closest well to Benham)
 - Tritium is ~1,300 times the MCL
 - Plutonium is ~0.05 times the MCL
 - Iodine is ~0.27 times the MCL
 - Carbon-14 is ~0.24 times the MCL
 - All others are less than 1% of MCL
 - Measured concentrations from ER-20-7 (further downgradient)
 - Tritium is ~680 times the MCL
 - Iodine is ~0.15 times the MCL
 - Carbon-14 is ~0.08 times the MCL
- **Radionuclides Above the MCL: A Cheshire Plume Perspective**
 - A radionuclides plume is moving south from Cheshire
 - Measured concentrations from UE-20n 1 (closest well to Cheshire)
 - Tritium is ~2,650 times the MCL
 - Technetium is ~0.05 times the MCL
 - Iodine is ~0.41 times the MCL
 - Carbon-14 is ~0.11 times the MCL
 - All others are less than 2% of MCL
- **Other Radionuclides**
 - At the wells closest to the sources, only tritium is present above the MCL, but other radionuclides are present above 10% of the MCL (wells ER-20-5-1, ER-20-7, UE-20n 1)

- At wells further downgradient (wells ER-20-11 and ER-EC-11), all radionuclide concentrations decrease; only tritium is observed above MCL, no other radionuclides observed above 10% of the MCL
- The following wells have tritium observed above the MCL, but no other radionuclides observed above 10% of the MCL (wells ER-20-5-3, ER-20-6-2, and ER-20-12)

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

- The half-life of a radioactive substance is the amount of time required for half of its atoms to decay. The half-life of tritium is around 12.3 years. A rule of thumb is that it takes ten half-lives for tritium to decay below the regulatory standard.
- In wells that are located west and southwest of the NNSS, there has been no man-made tritium detected off the NNSS, although there may be trace amounts of natural tritium in the air, groundwater, or the rock formations.
- Groundwater models calculate how far contaminants will travel over a 1,000-year period. Although there is a confidence level in these models, there will always be a degree of uncertainty. With a worst case scenario in areas of Pahute Mesa with groundwater velocities estimated up to 300 feet per year, model forecasts show contaminants will not transport beyond Federal property.
- The elevation of Pahute Mesa is around 7,000 feet with the elevation of Beatty, NV is around 3,300 feet.
- The SDWA standard for tritium is 20,000 pCi/L, which is based on a lifetime dose to incur cancer risks that are deemed unacceptable. Tritium is quantified by utilizing scintillation counters to measure the activity or rate of decay. The tritium standard of 20,000 pCi/L cannot be converted into milligrams or micrograms in order to measure, although it is a very small amount.
- At Pahute Mesa, all of the impacts of historic nuclear testing on the groundwater is subsurface. There is no contamination contained in the surface water. After a rain, there may be runoff with a small infiltration of contaminants from soil-contaminated areas, but none of these contaminants transport off the NNSS.

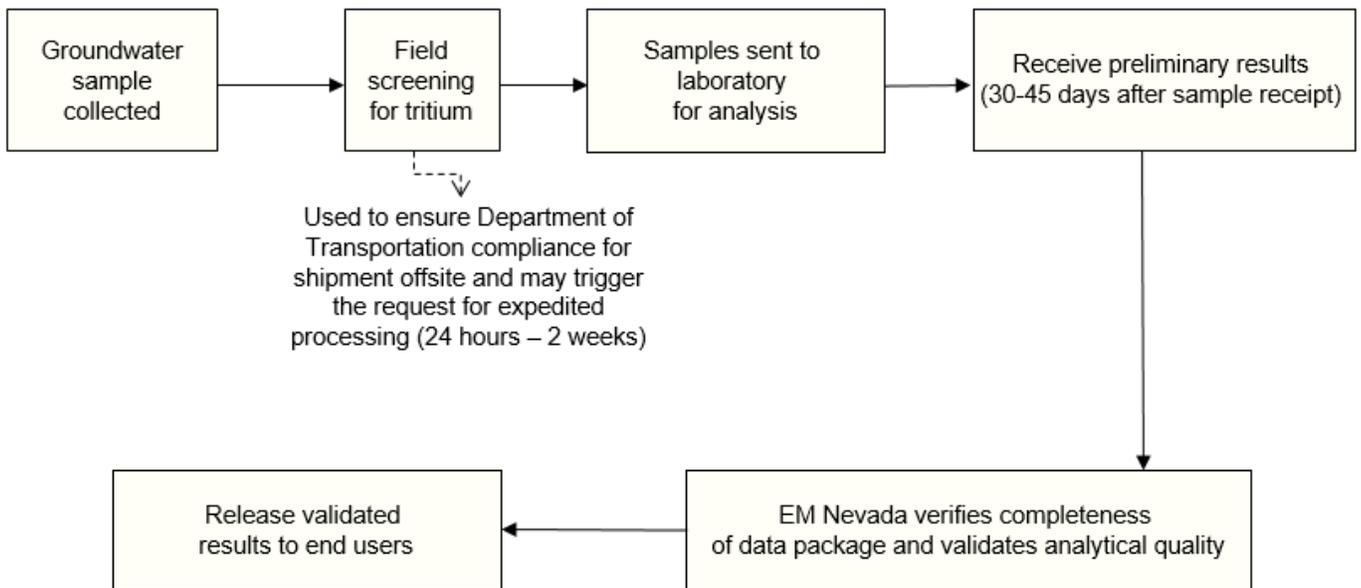
Offsite Groundwater Communication Plan *(Kelly Snyder, DOE)*

- **NSSAB Work Plan Item #6**
 - From a community perspective, provide a recommendation to the EM Nevada Program on if the Offsite Groundwater Communication Plan is supported by the NSSAB and/or how it could be improved
 - The NSSAB recommendation is due by March 2019
- **Purpose of Communication Plan**
 - Identifies when and with whom external communication will take place if/when radioactive contamination is found in groundwater sampled by the EM Nevada Program at locations beyond the NNSS borders
- **Five Key Components to the Communication Plan**
 - **Who** obtained the sample?
 - **Where** are the samples taken from?
 - **What** are the analytical results?
 - **When** should the results be communicated?
 - **Who** should DOE EM Nevada communicate the results to?

- **Multiple Entities Sample Groundwater Related to the NNSS**
 - DOE EM Nevada Program
 - Routine Radiological Environmental Monitoring Plan (RREMP)
 - Funded by National Nuclear Security Administration (NNSA)
 - Community Environmental Monitoring Program (CEMP)
 - Funded by NNSA
 - Nye County Tritium Sampling and Monitoring Program (TSaMP)
 - Funded by DOE EM Nevada grant
- **Scope of Communication Plan**
 - Only DOE EM Nevada Program samples are within the scope of the plan
 - Long-term vision: communication plan will expand to cover wells sampled by NNSA, CEMP, and the TSaMP
- **Five Key Components to the Communication Plan**
 - **Who** obtained the sample?
 - *DOE EM Nevada Program*
 - **Where** are the samples taken from?
 - **What** are the analytical results?
 - **When** should the results be communicated?
 - **Who** should DOE EM Nevada communicate the results to?
- **Groundwater Well Locations**
 - NNSS
 - NTTR
 - Gray-shaded areas:
 - Bureau of Land Management (BLM)
 - Public
 - Private
- **Five Key Components to the Communication Plan**
 - **Who** obtained the sample?
 - *DOE EM Nevada Program*
 - **Where** are the samples taken from?
 - *NTTR or Public/Private/BLM land*
 - **What** are the analytical results?
 - **When** should the results be communicated?
 - **Who** should DOE EM Nevada communicate the results to?
- **Analytical Results**
 - Independent, State of Nevada-certified laboratories are used
 - Samples are analyzed for:
 - Levels of general chemistry parameters, such as pH (acidity/alkalinity) and specific conductance
 - 18 different metals (including lead), as well as for gamma emitting, gross alpha and beta, and the radioisotopes tritium, strontium-90, carbon-14, chlorine-35, technetium-99, iodine-129, and plutonium-238, -239 and -240
 - There are established SDWA standards for contaminants and most radionuclides
- **Tritium**
 - Most common radionuclides found in groundwater at the NNSS (did you know – much of the radionuclides released during underground nuclear testing are trapped in the melt glass of the nuclear test cavity and surrounding rock)
 - Most mobile in groundwater; therefore, a leading indicator that other contaminants may be present, making it a primary contaminant of study

- SDWA standard for tritium is 20,000+ picocuries per liter (pCi/L)

- **Flowchart of EM Nevada Samples Through Nevada State-Certified Labs**



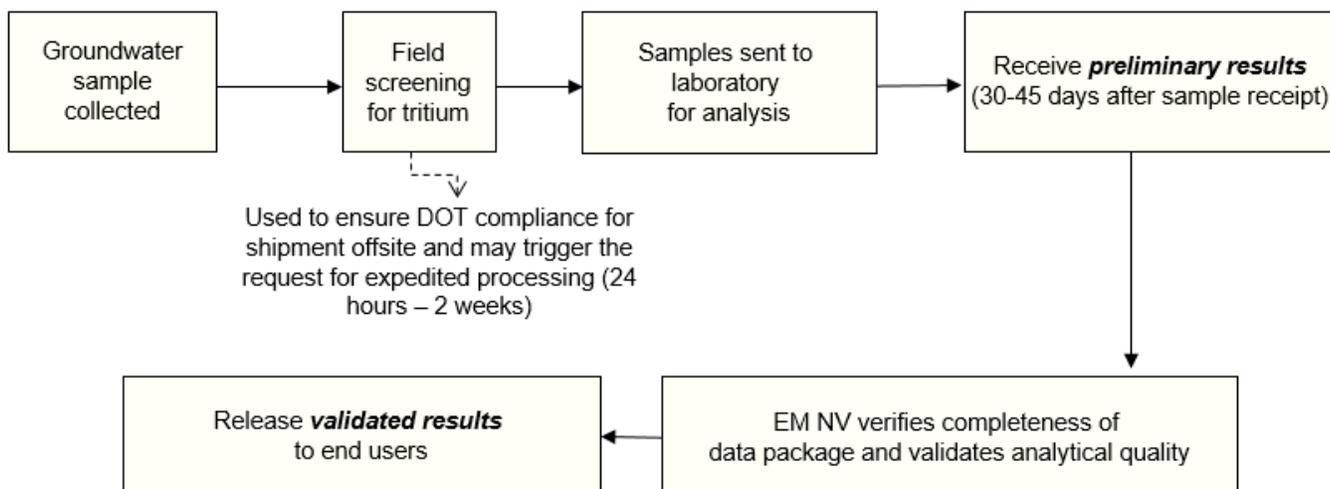
- **Understanding Analytical Results**

- Divided into three categories for communication purposes
 - More than 100% of SDWA – should not consume
 - For tritium 20,000+ pCi/L
 - More than 50% of SDWA – safe to consume
 - For tritium 10,000 – 19,999 pCi/L
 - More than 10% of SDWA – safe to consume
 - For tritium 2,000 – 9,999 pCi/L

- **Five Key Components to the Communication Plan**

- **Who** obtained the sample?
 - *DOE EM Nevada Program*
- **Where** are the samples taken from?
 - *NTTR or Public/Private/BLM land*
- **What** are the analytical results?
 - *Guided by the SDWA*
- **When** should the results be communicated?
- **Who** should DOE EM Nevada communicate the results to?

- **External Communication Points**



- **Five Key Components to the Communication Plan**

- **Who** obtained the sample?
 - *DOE EM Nevada Program*
- **Where** are the samples taken from?
 - *NTTR or Public/Private/BLM land*
- **What** are the analytical results?
 - *Guided by the SDWA*
- **When** should the results be communicated?
 - *Preliminary and Validated results are obtained*
- **Who** should DOE EM Nevada communicate the results to?

- **Communication Matrixes**

- DOE EM Nevada will utilize communication matrixes to identify who should be told of the analytical results and when they will be told
- Communication matrixes are specific to the sampling location

- **Communication Matrix – NTTR Locations**

Analytical Results	Communication Actions for Preliminary Results	Communication Actions for <u>Validated</u> Results
First-time detection of Contaminant of Concern (COC) or Contaminant of Potential Concern (COPC) is $\geq 10\%$ of its SDWA MCL	Notify State of Nevada Division of Environmental Protection (NDEP)	Notify NDEP; notify United States Air Force (USAF); notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
COC or COPC concentration is \geq SDWA MCL	Notify NDEP, notify USAF	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting; EM Nevada article sent to distribution list (includes media)

- **Communication Matrix – Public, Private, and BLM Locations**

Analytical Results	Communication Actions for <u>Preliminary</u> Results	Communication Actions for <u>Validated</u> Results
First-time detection of COC or COPC is $\geq 10\%$ of SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
COC or COPC concentration is \geq SDWA MCL	Notify NDEP, notify land owner or permit holder	A specific communication plan will be written that will include notifications to at least the following: elected officials, media, NDEP, and land owner/permit holder, and NSSAB

- **Demonstration of How to Use the Communication Matrixes Using Fictitious Examples**

- Fictitious Example #1
 - Well: ER-EC-123 on the NTTR
 - Preliminary result: 18,400 pCi/L of tritium
 - 92% of the SDWA for tritium

NTTR Locations		
Analytical Results	Communication Actions for <u>Preliminary</u> Results	Communication Actions for <u>Validated</u> Results
First-time detection of COC or COPC is $\geq 10\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify USAF; notify NSSAB during next Full Board meeting
COC or COPC concentration is \geq SDWA MCL	Notify NDEP, notify USAF	Notify NDEP; Notify USAF; notify NSSAB during next Full Board meeting; EM NV article sent to distribution list, including media

- Fictitious Example #2
 - Well: ABC on public land
 - Validated result: 3,180 pCi/L of tritium
 - 15.9% of the SDWA for tritium

Public, Private and BLM Land		
Analytical Results	Communication Actions for <u>Preliminary</u> Results	Communication Actions for <u>Validated</u> Results
First-time detection of COC or COPC is $\geq 10\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
First-time detection of COC or COPC is $\geq 50\%$ of its SDWA MCL	Notify NDEP	Notify NDEP; notify land owner or permit holder; notify NSSAB during next Full Board meeting
COC or COPC concentration is \geq SDWA MCL	Notify NDEP, notify land owner or permit holder	A specific communication plan will be written that will include notifications to at least the following: elected officials, media, NDEP, and land owner/permit holder, and NSSAB

- **Things to Consider**
 - Ensuring communities have access to the information in a timely and accurate manner
 - Avoid unnecessarily scaring communities
 - Information can be miscommunicated (the telephone game, rumors, etc.)
 - Privacy of private well owners
 - Sampling results are published in the NNSS Annual Site Environmental Report and the UGTA Annual Sampling Report
- **Path Forward**
 - From a community perspective, provide a recommendation to the EM Nevada Program on if the Offsite Groundwater Communication Plan is supported by the NSSAB and/or how it could be improved
 - The NSSAB recommendation is due by March 2019

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

- In the Offsite Groundwater Communication Plan, there is a section documenting the internal notifications to Federal staff by contractors, including a flow chart, that are required after sampling results are obtained.
- In most cases, the EM Nevada Program takes a duplicate sample in case there is a lab anomaly with the first sample. If a duplicate sample is unavailable, the EM Nevada Program would make the appropriate notifications per the Communication Plan and follow-up with another sample to ensure that the contaminant concentrations are valid.
- The Offsite Groundwater Communication Plan establishes a process for the EM Nevada Program to follow and provide guidelines for communicating offsite groundwater incidents. The plan is not for public use.
- If the information that the EM Nevada Program is communicating based on the Communication Plan is within the parameters that the groundwater is safe to consume, there would be no triggers for additional communications, although there would be additional technical activities that UGTA would conduct. If a notification involved groundwater contamination greater than the SDWA standard, there would be additional notifications required per the Communication Plan. Each occurrence would be considered and responded to on a case-by case basis.

After all questions were answered, Chair Bonesteel initiated Board dialogue on a path forward for the Offsite Groundwater Communication Plan – work plan #6. Member Twiddy proposed two options for a path forward: the Board could discuss a potential recommendation(s) tonight or have a short presentation at the January 2019 Full Board meeting to refresh the Board's memory after members have had time to consider the plan more fully. Member Fullen made a motion that the Offsite Groundwater Communication Plan be accepted as presented as it is an excellent plan, well thought out, and simple to follow. The motion was seconded. Members had the opportunity to both speak in opposition and in support of the motion. After all Board discussion was complete, Chair Bonesteel called for the motion by show of hands with ten members in favor, five members in opposition, and two members abstained. The motion passed with a majority vote.

Mr. Twiddy requested an educational briefing on the process from start to finish that the EM Nevada Program follows to qualify a potential generator to become an NNSS-approved/certified waste program and the follow-up that is conducted to ensure that the generator follows the NNSS WAC. He also expressed interest in learning more on the various DOE waste classifications, high-level waste, LLW, MLLW, transuranic waste, spent nuclear fuel, etc., and how these waste classifications are determined. Chair Bonesteel pulsed the Board and a majority of the members

were also interested in both topics. The EM Nevada Program will provide additional information on these two topics during future Full Board meetings.

Meeting Wrap-Up and Adjournment

Upcoming calendar of events:

- NSSAB Full Board Meeting at the Valley Conference Center in Pahrump, NV – January 16, 2019 starting at 4 p.m.
- LLWSF in Pahrump, NV – Date TBD

Any questions on the calendar of events, please contact the NSSAB Office at 702-523-0894.

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

Meeting adjourned at 8:08 p.m.