

Nevada Site Specific Advisory Board

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**Full Board Meeting Handouts for
Wednesday, July 20, 2016**

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NSSAB MEETING ATTENDANCE

Full Board Meetings

October 2015 through September 2016 (FY 2016)

Name	11/10/15	1/20/16	3/16/16	5/18/16	7/20/16	9/21/16	Max Terms
MEMBERS							
Michael Anderson	√	√	E	√			2020
Amina Anderson	√	√	√	√			2020
Michael D'Alessio	√	√	√	√			2020
Pennie Edmond	√	√	√	√			2020
Donna Hruska	√	√	√	√			2016
Janice Keiserman	√	√	√	√			2018
Michael Moore	√	E	√	√			2016
Donald Neill	√	E	√	√			2020
Edward Rosemark	√	√	√	√			2018
Steve Rosenbaum	√	√	√	√			2020
William Sears	√	√	√	√			2018
Thomas Seley	√	√	√	√			2020
Cecilia Flores Snyder	√	√	√	√			2020
Jack Sypolt	√	E	√	√			2017
Francisca Vega	√	E	√	U			2020
LIAISONS							
Clark County	√	√	√	√			
Consolidated Group of Tribes and Organizations	√	E	√	√			
Esmeralda County Commission	√	√	U	E			
Nye County Commission	E	U	U	U			
Nye County Emergency Management				√			
Nye Co. Nuclear Waste Repository Project Office	√	√	√	√			
State of NV Division of Env Protection	√	√	√	√			
U.S. Natl Park Service	E	√	E	E			
KEY: √ = Present E - Excused V=Vacant U = Unexcused RM = Remove RS = Resign							

Air Monitoring Stations at the Tonopah Test Range Work Plan Item #4



Dr. Vic Etyemezian

Division of Atmospheric Sciences, DRI
Nevada Site Specific Advisory Board (NSSAB)

July 20, 2016



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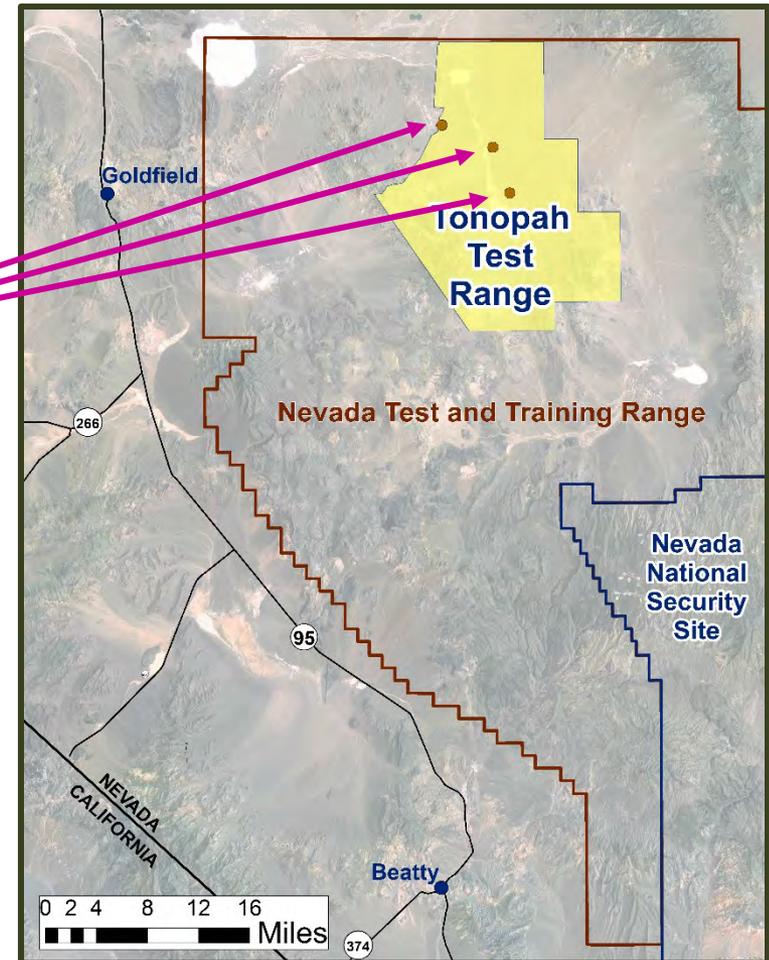
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NSSAB Work Plan Item #4

Provide a recommendation, from a community perspective, on whether air monitoring stations on the Tonopah Test Range (TTR) should be moved to different locations, maintained at the current locations, or the sampling approach modified



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Presentation Outline

- What is the TTR?
- Why is air being monitored and samples collected?
- What is being monitored?
- Where are the monitoring stations?
- What are the monitoring results?



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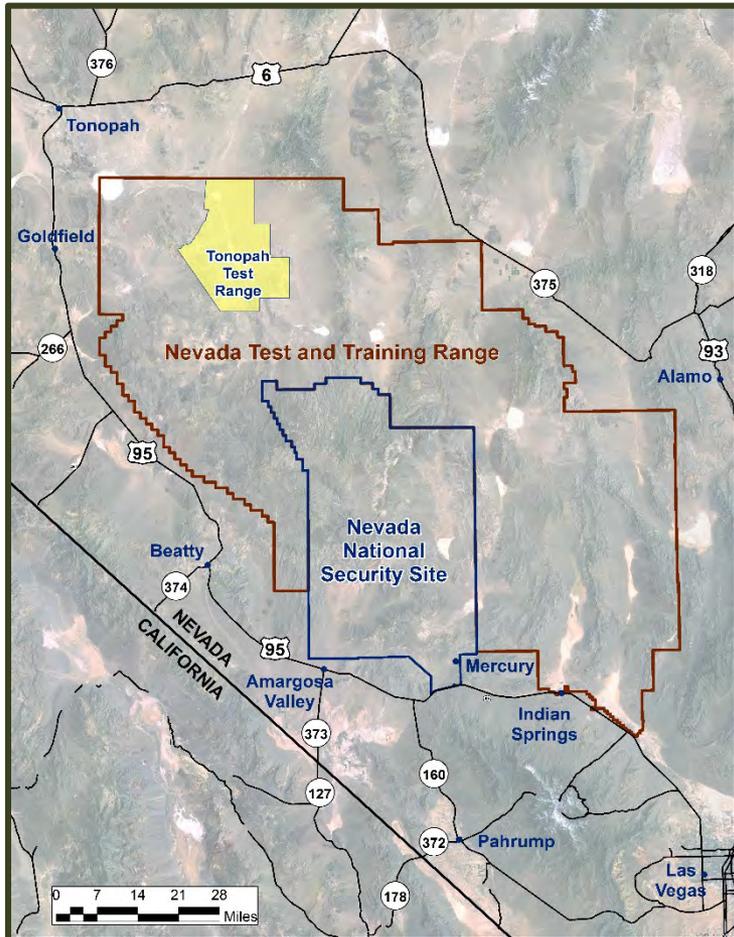
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TTR



- Secure and remote location
- Broad, flat valley provides long flight corridor
- Operations managed by Sandia for the National Nuclear Security Administration
- Testing range for weapon components and delivery systems
- Nevada Field Office has environmental management responsibilities for several sites on the TTR
 - Sandia and U.S. Air Force do not conduct operations within fenced areas of these environmental sites



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Air Monitoring Sites Background

- Clean Slate I, II, and III are the sites of plutonium dispersal tests conducted in 1963
- Detonation of high explosives on a variety of surface structures with various combinations of weapon material [plutonium (Pu), americium (Am), and uranium (U)]
- Plutonium dispersed over large areas (total 890 acres based on aerial surveys)
 - Radionuclides dispersed in plumes southeast from detonation points
- Although some cleanup activities have occurred, contaminants remain in place



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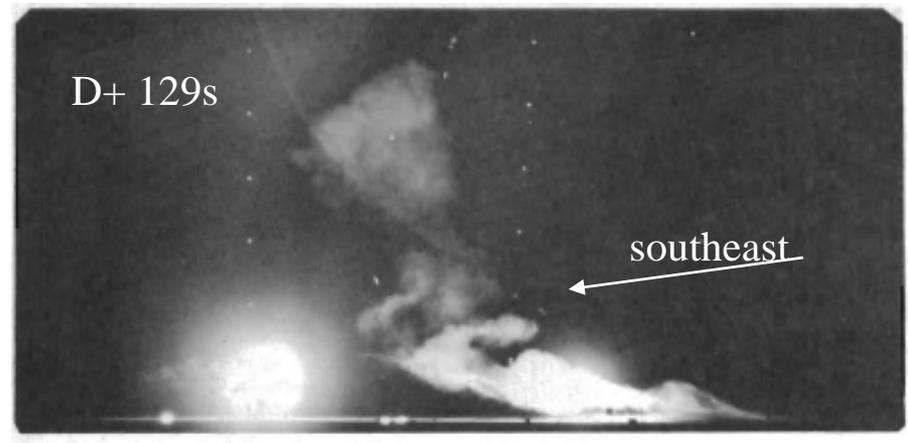
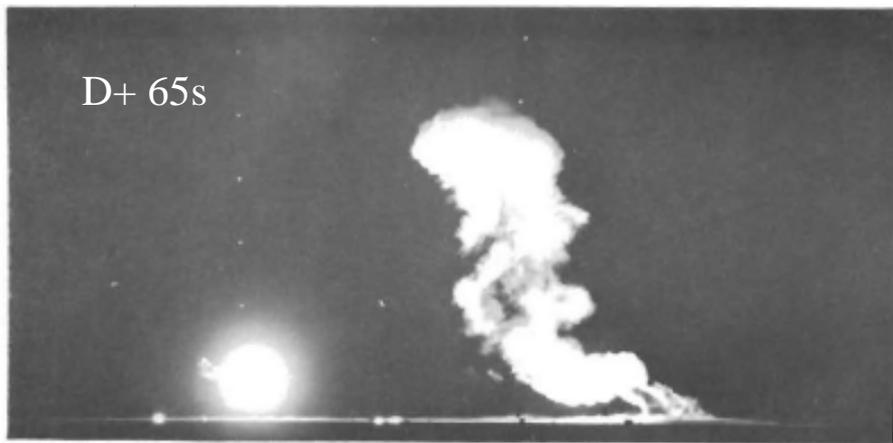
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Clean Slate I Test Photos, May 25, 1963



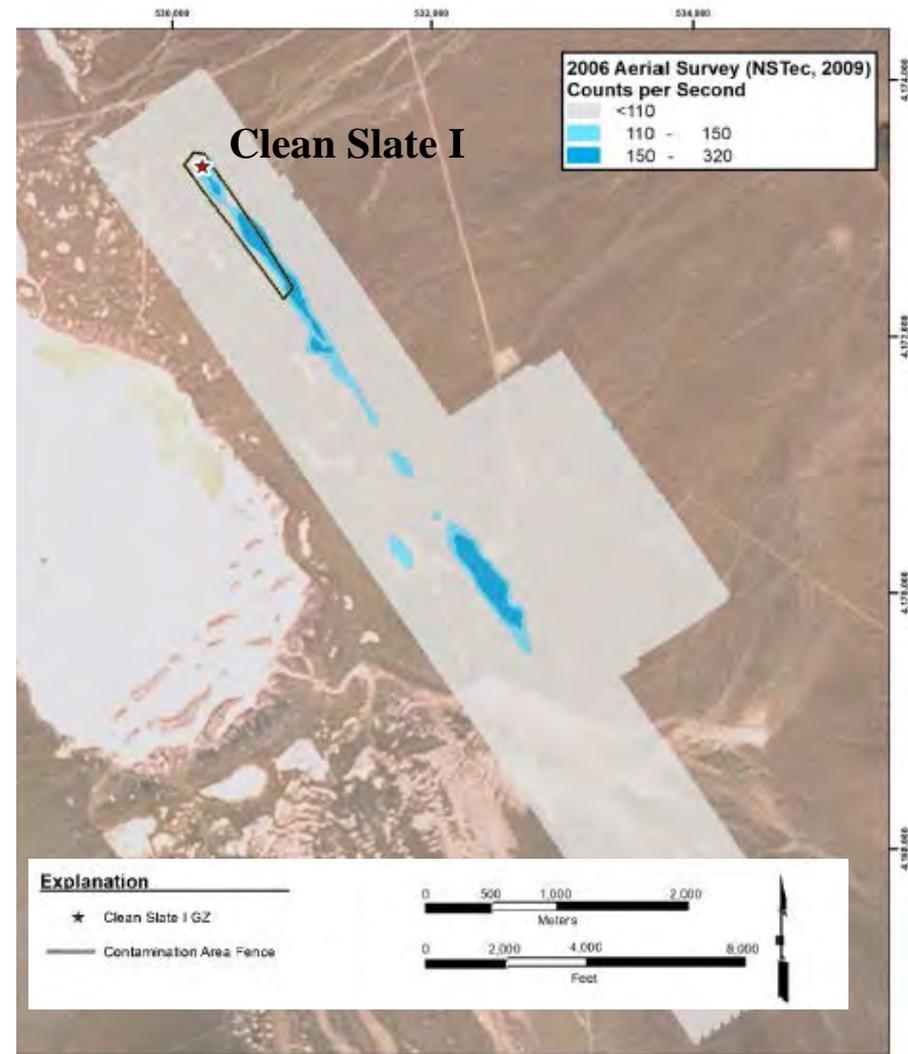
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Status of Sites

- Post-test debris gathered into soil mounds and soil from detonation areas scraped into mounds, all covered by other soil
- Fences constructed around contaminated areas
- Clean Slate I remediated through removal of debris, mounded soil, and highly contaminated soil in the 1990s
- Clean Slate II and III have not undergone the same remediation and higher levels of contamination are present



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Purpose of Current Air Monitoring

- Evaluate whether there is wind transport of radiological contaminants from the Clean Slate sites
 - If transport is observed, determine under what conditions it occurs and its magnitude
- Characterize airborne radiological conditions at the Range Operations Center, near the location of most TTR workers
- Provide data for Sandia TTR annual site environmental monitoring report
- Support development of closure and long-term stewardship strategies



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Monitoring Focus

- Movement of soil particles by wind and the factors that control it
 - Meteorological conditions
 - Site properties (soil conditions, local topography, and vegetation cover)
- Radiological conditions



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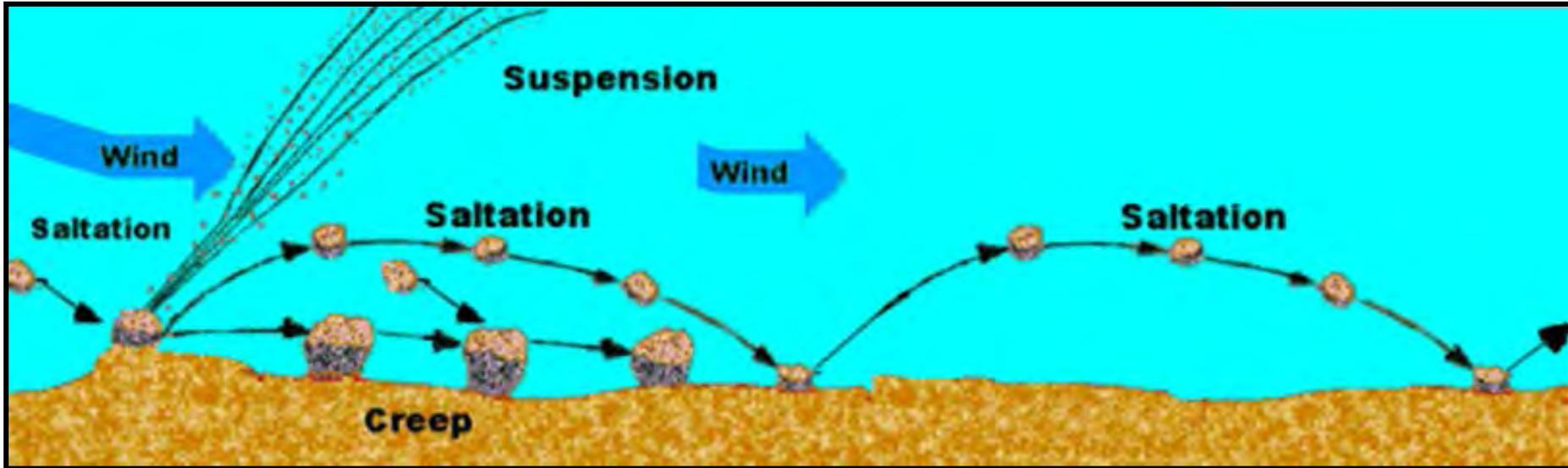
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Saltation & Suspension



- Saltation (sand ballistic impacts on soil) is primary means of emitting dust
- Amount of sand carried across a line should relate to amount of dust emitted from surface



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Mechanisms of Windblown Transport

- Creep
 - 0.2 - 2 millimeter (mm) particles roll due to pressure differential
- Saltation
 - 0.04 - 0.4 mm particles suspended, travel parallel to ground from 1 - 5 meters (3.3 - 16.4 feet), then re-impact
 - Cause release of additional particles
- Emission/Suspension
 - 0.001 - 0.03 mm particles (“dust”) suspended and transported between 10 - 10,000 meters (32.8 feet - 6.2 miles)



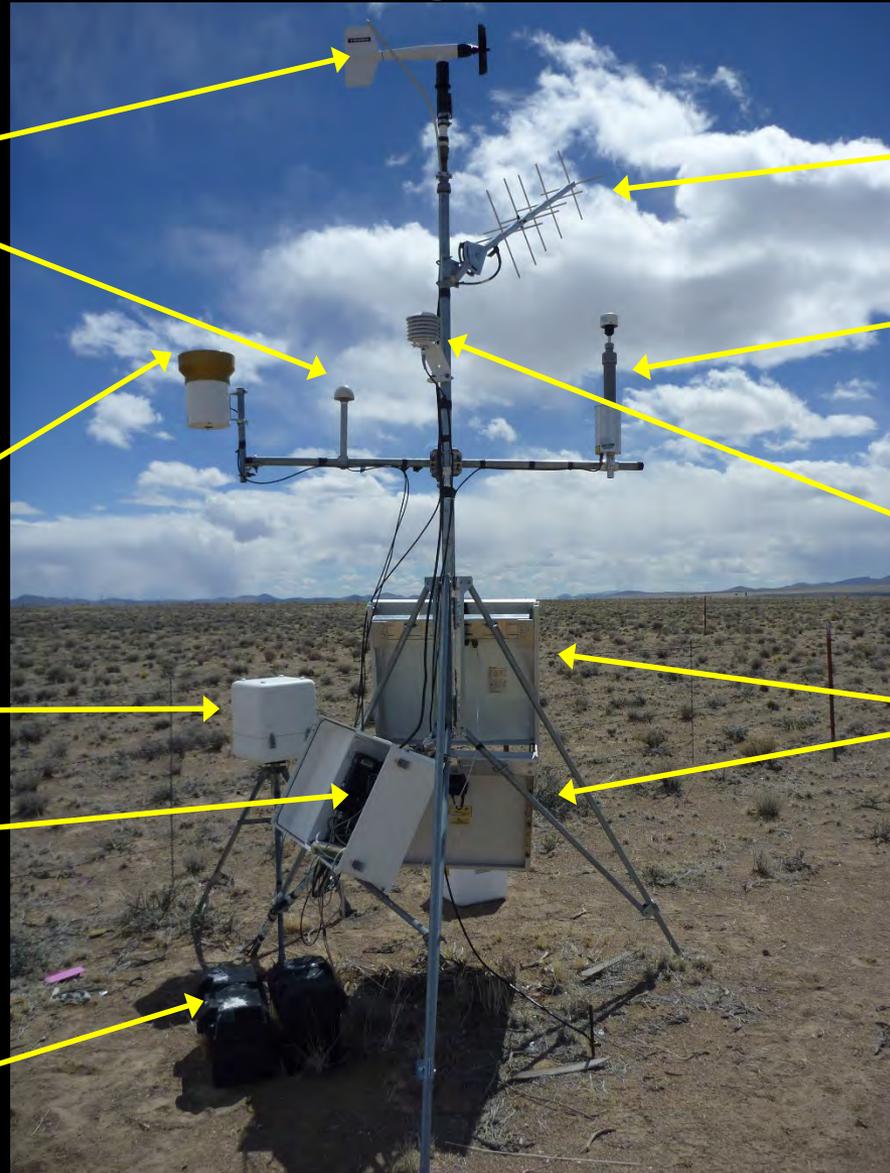
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Meteorological Station



Wind vane/
anemometer

Solar radiation

Precipitation
gage

Gamma Pressurized
Ion Chamber

Datalogger
barometric
pressure

Battery bank

Radio telemetry
antenna to
satellite uplink

Particle size
profiler

Temperature/
relative humidity

Solar panel

Air Sampler

- Collects suspended dust particles onto filter
 - Operates continuously
 - Timing of when particles are collected cannot be known accurately
 - Collected airborne particulates can be analyzed for radionuclide content



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Saltation* Sensors



- Piezo-electric impact sensor**
 - Measures impacts of sand grains above detectable threshold for size and speed
 - Provides means to track sand movement in response to specific wind conditions



* Saltation: hop along the ground under action of the wind

**Sensit Inc, Redlands, CA



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Sand Traps



- Wedge-shaped trap
 - Collects sand particles that saltate into opening
 - Timing of when sand grains are collected cannot be known accurately
 - Collected sediment can be analyzed for radionuclide content



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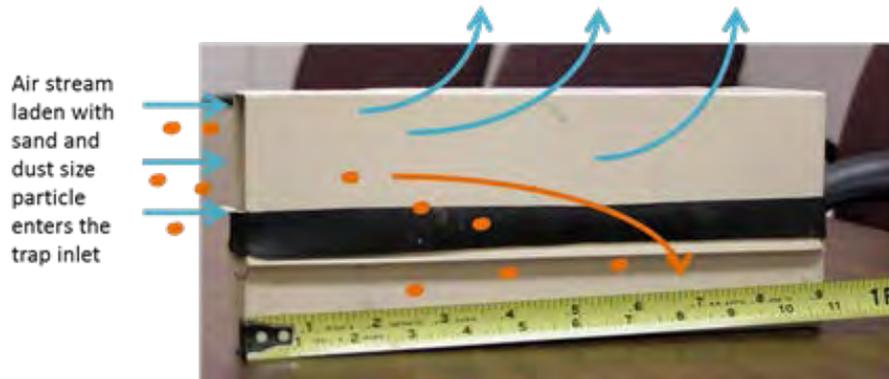
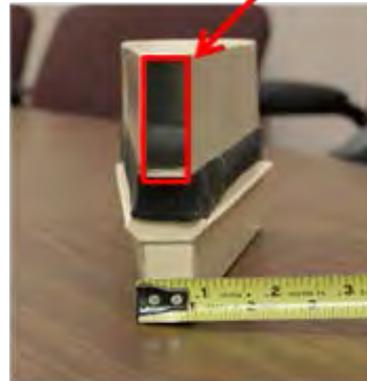
Sand Traps (continued)

Sand Trap Bottom
Collection Pan

Sand Trap Top
Air Outlet

Sand Trap Inlet
Opening

Sand Trap Top Air Outlet is made
out of fine wire mesh that allows
air to exit

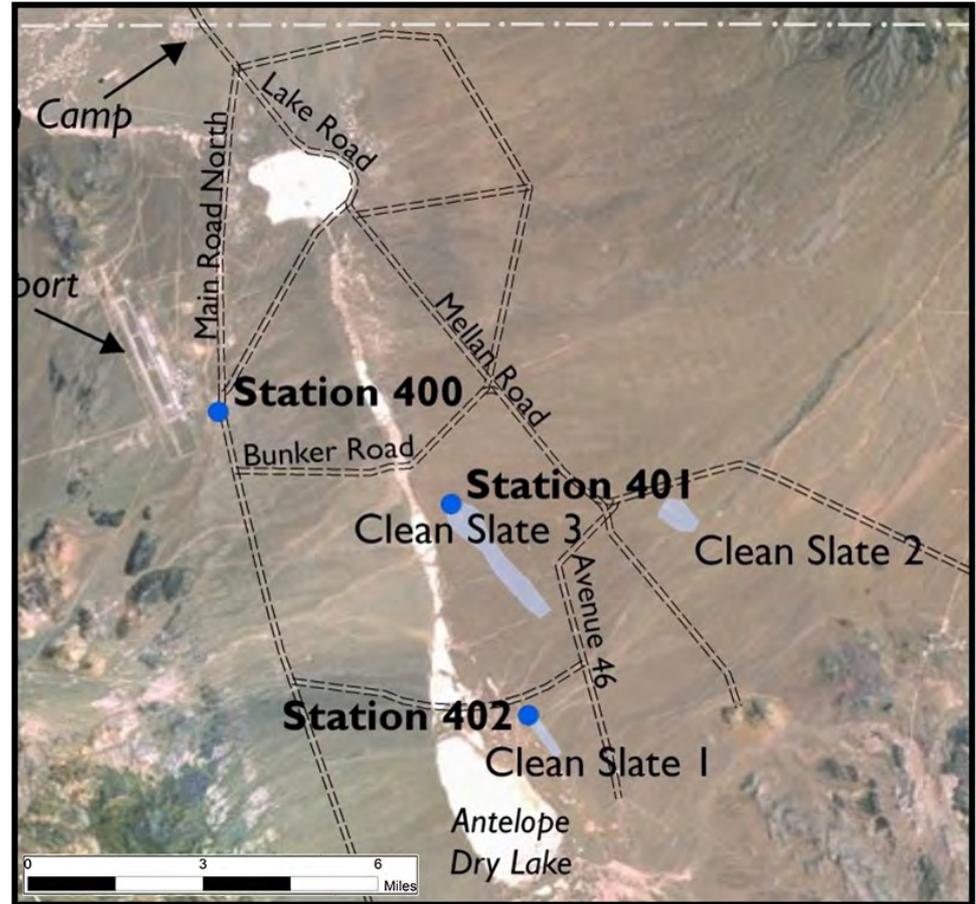


Trap outlet (on top)
is bigger than the
opening causing air
to expand and slow
down prior to exit



Monitoring Station Locations

- Three portable stations (trailer mounted or partially trailer mounted)
- Locations chosen based on wind direction, access, power availability
 - Wind data for the Tonopah Airport used initially and identified northwest and south-southeast as predominant directions (substantiated by later station measurements)



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Station Facts*

Station 400

- Range Operations Center is closest regularly manned work area
- 5-6 miles from Clean Slate sites
- No saltation sensors or sand traps
- Operating since 2008



Station 401

- Closest to main work force
- Along northwest perimeter of Clean Slate III fence
- Includes saltation sensor and sand traps
- Operating since 2008

Station 402

- Closest to military training operations
- Along northwest perimeter of Clean Slate I fence
- Includes saltation sensor and sand traps
- Operating since 2011

*All Stations are Northwest of Sites, Downwind During South-Southeast Winds



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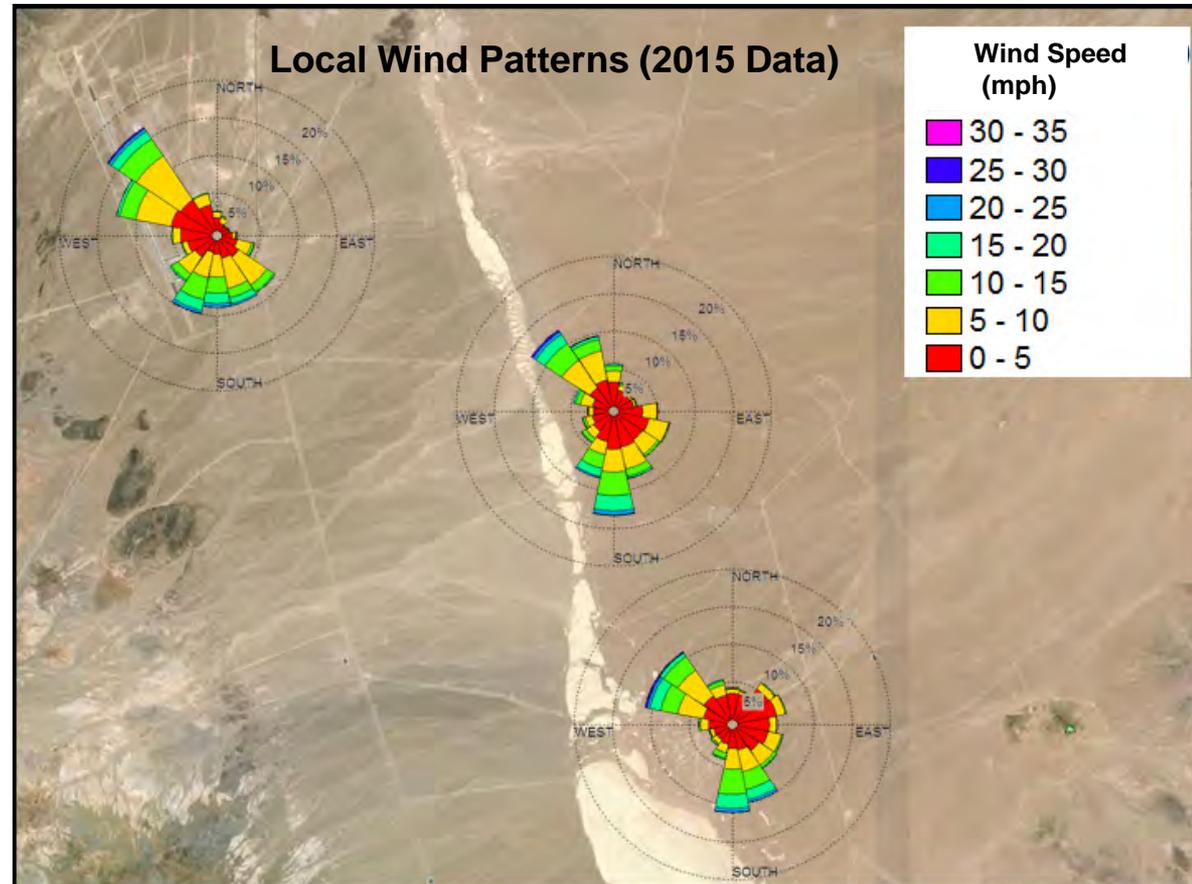
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Monitoring Results

- Tracked local wind patterns and speed
- Observed soil particle movement
 - Saltation
 - Suspension
- Radiologic measurements of airborne particulates and saltating material
 - Gamma radiation



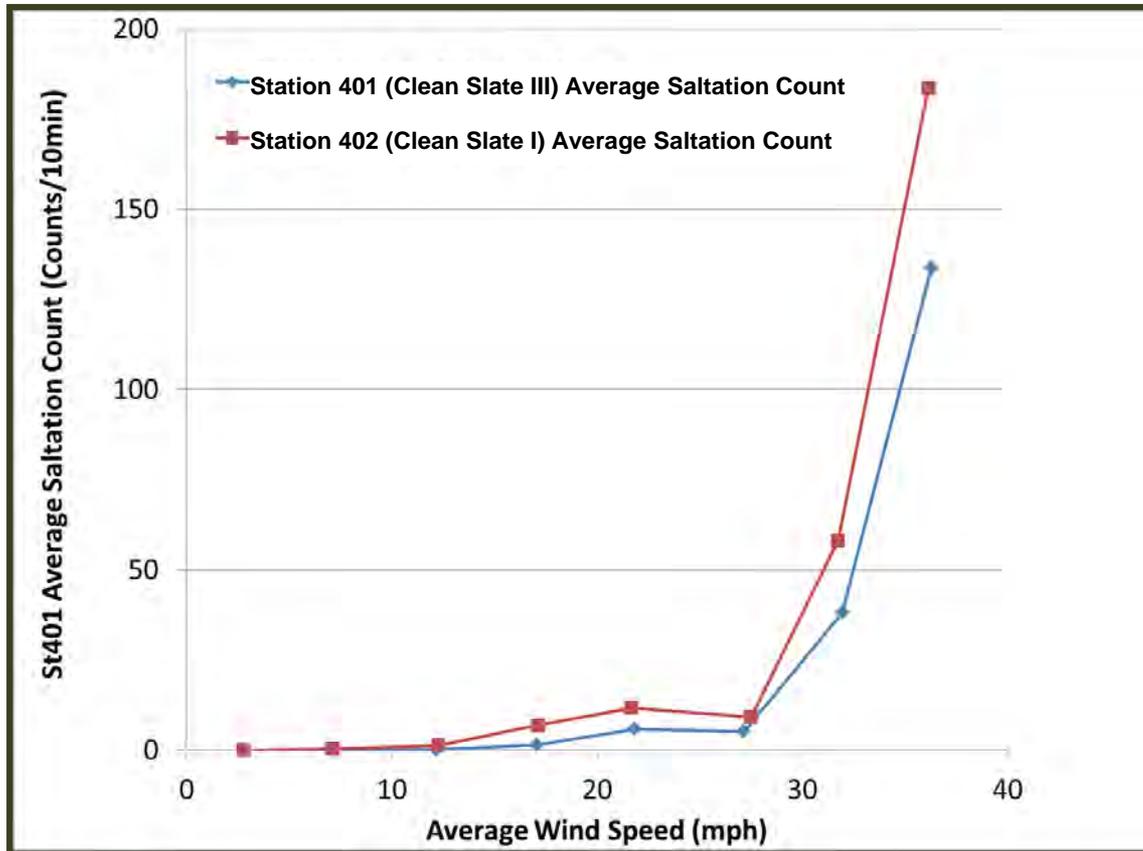
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Observed Sand Saltation



- Data from piezo-electric impact sensors
- Nonlinear relationship between wind speed and saltation
- Threshold of about 15-20 mph for onset of saltation



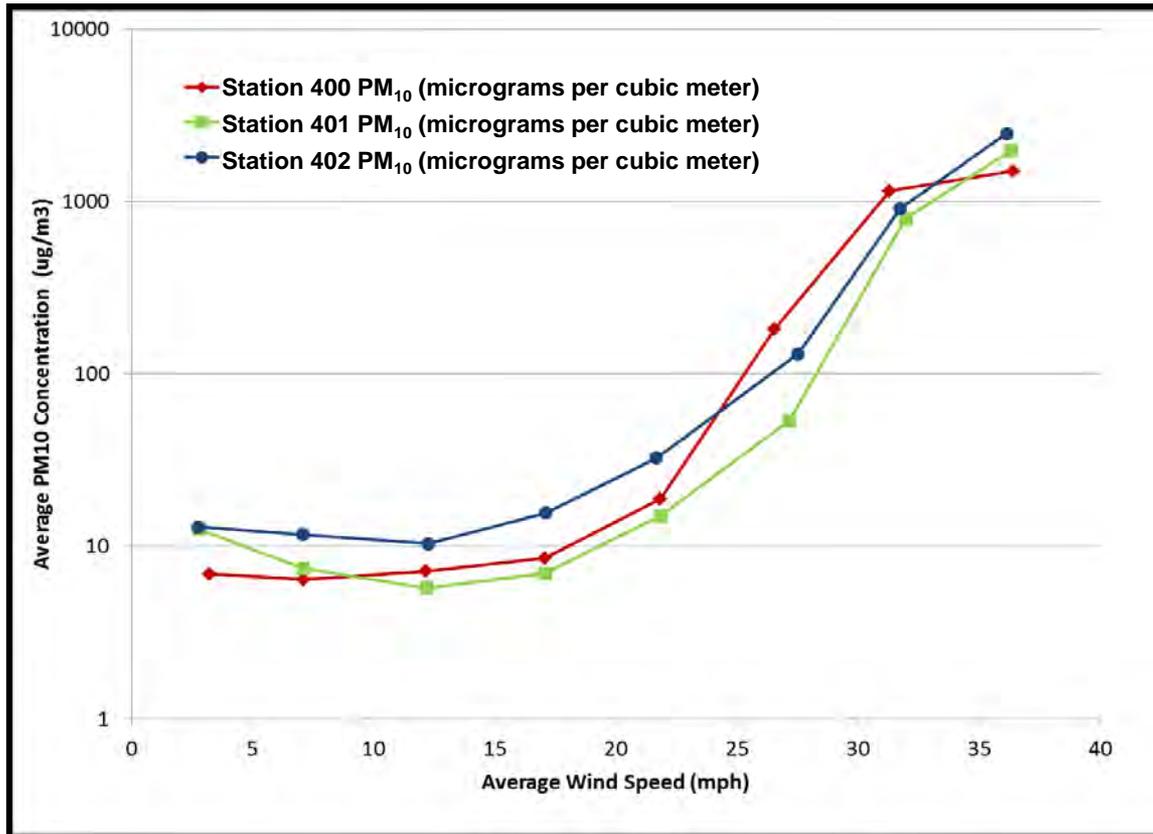
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Dust Suspension – Wind Speed and Particulate Matter (PM₁₀)



- PM₁₀ (particles smaller than 10 micrometers in diameter) are of health concern as they are inhaled into deepest part of lung
- Here, PM₁₀ is estimated from particle size profiler data (optical measurement)
- Threshold of about 15-20 mph for onset of dust emission



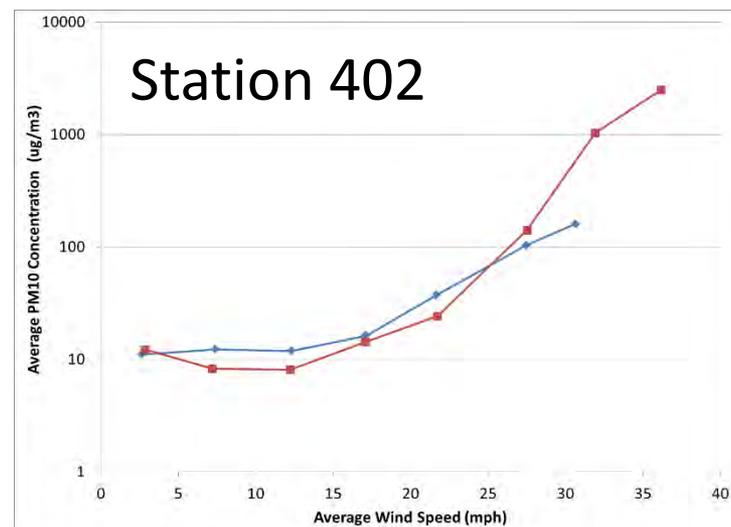
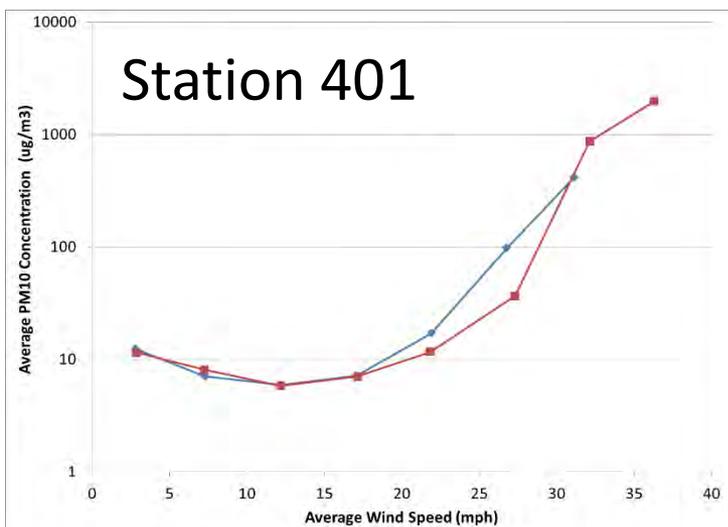
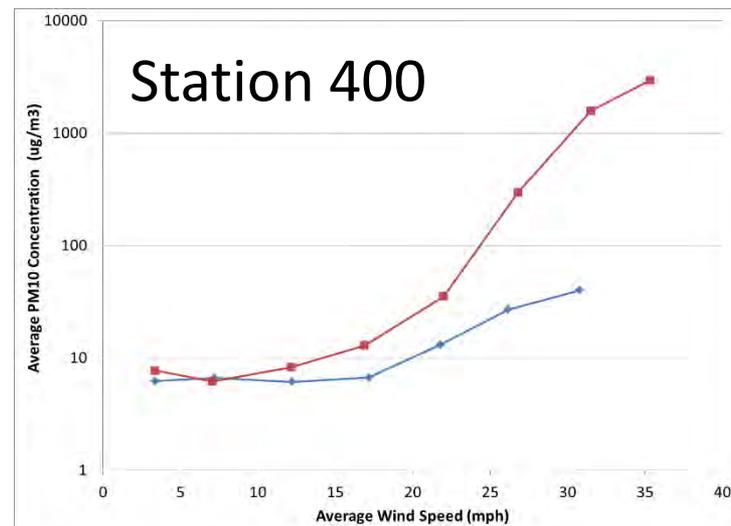
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Suspension –
 Wind Direction
Red = Northwest
Blue = South



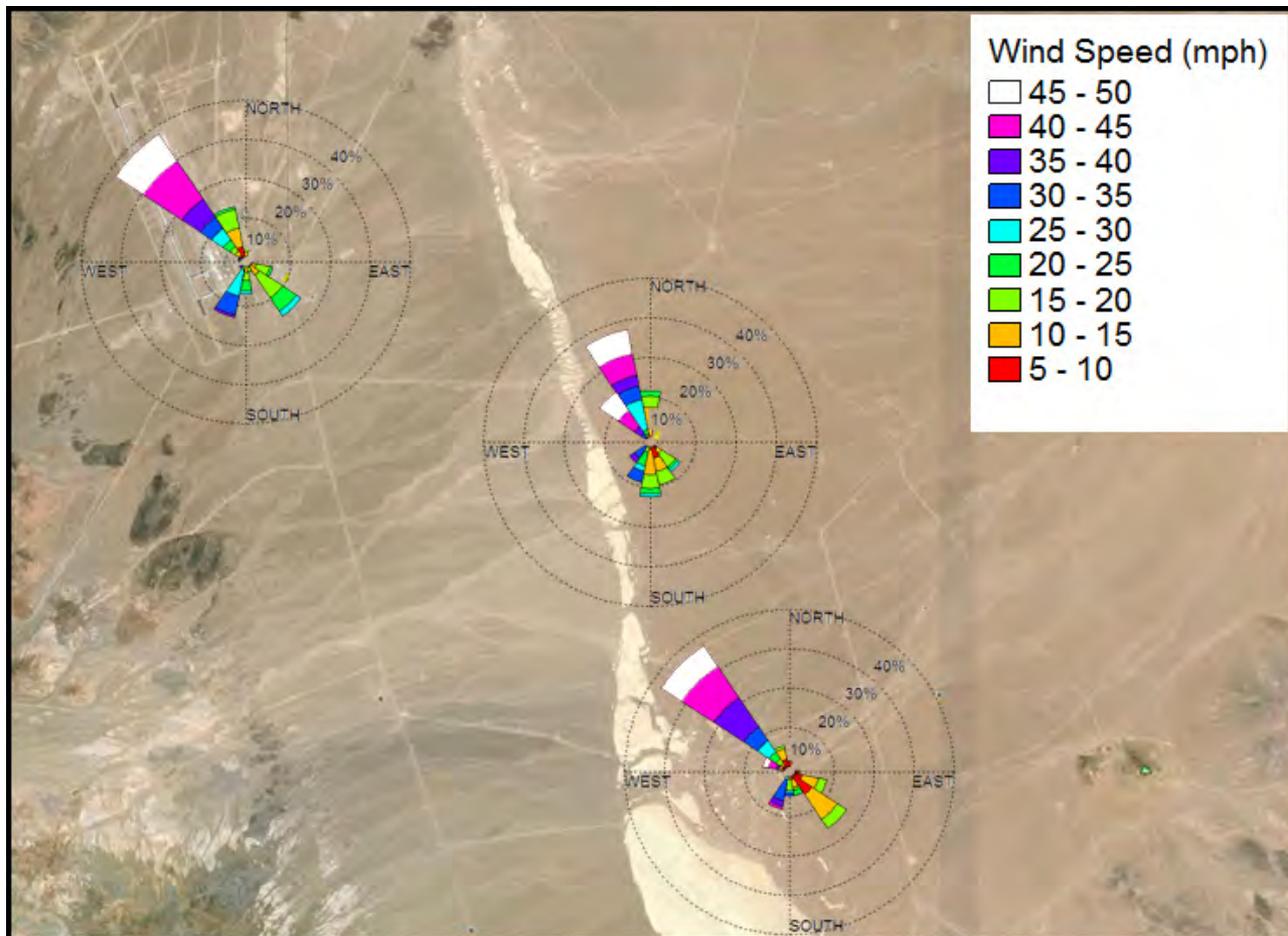
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Example Wind Event: April 15, 2015



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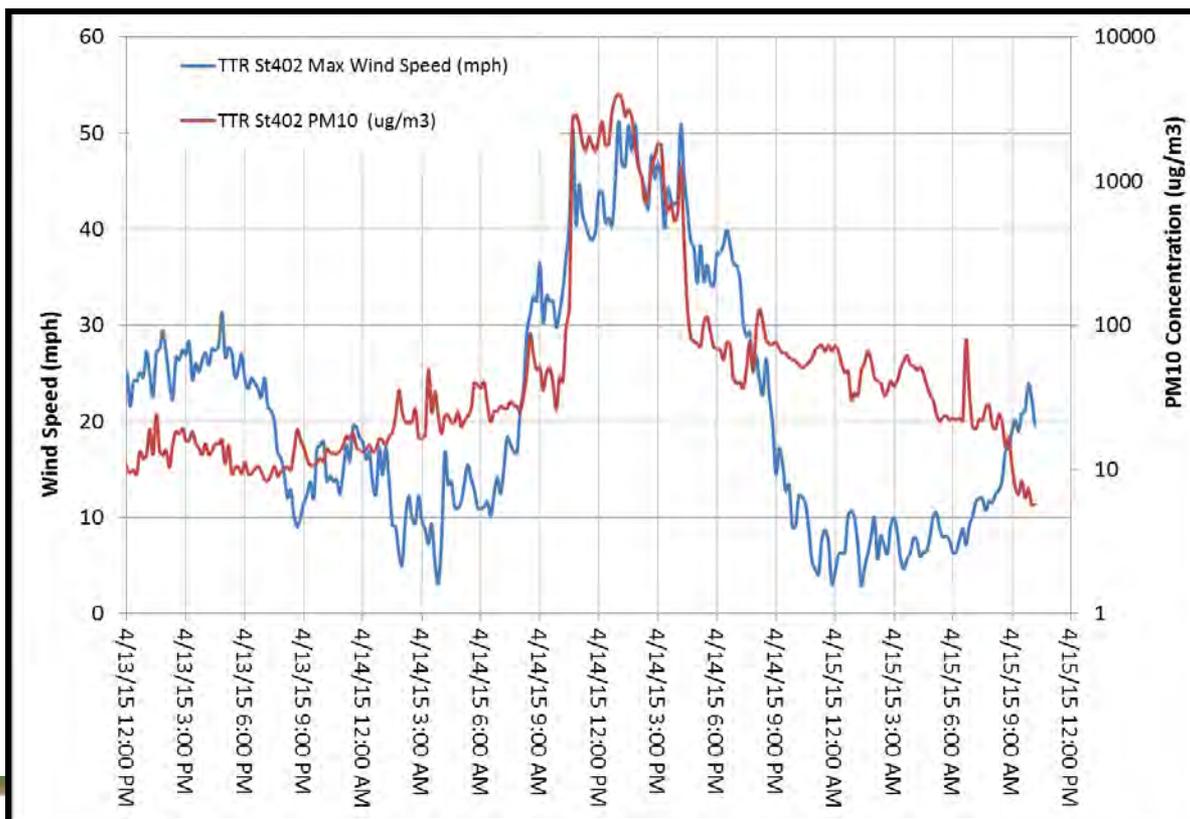
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Station 402 Maximum Wind Speed and PM₁₀ Concentration in Air

(April 15, 2015)



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Saltation & Suspension: Findings Recap

- Localized sand movement occurs under the influence of high wind
- Sand trap data indicate:
 - Dust transport is bi-directional depending on wind direction, with northerly winds apparently causing greater transport*

*Current monitoring focuses on capturing sand transporting off Clean Slates I and III under south-southeasterly winds



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Saltation & Suspension: Findings Recap

(continued)

- Sand transport can be highly variable from year to year due to:
 - Wind strength and direction distributions
 - Changes in vegetation cover
 - Influx of sand from annually variable alluvial processes (transported by precipitation runoff)
- Suspended dust is enhanced during high winds, but the source area is unclear
- Suspended dust at high winds is observed under both main wind direction regimes



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Radiologic Measurements: Findings

- Gross alpha and gross beta counts on filter samples are consistent with other samples from regional sites
- Gamma rate measurements in-situ are slightly higher than pressurized ion chamber (PIC) measurements elsewhere, probably as a result of location and geology
 - Periodic spikes occur during precipitation events
- Gamma spectrometry has only detected natural radionuclides (other than during Fukushima); alpha spectroscopy not performed
- Plutonium and americium above background levels detected by alpha spectroscopy of material captured in saltation traps



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Radiological Measurements

- Particulate sampling of suspended dust:
 - Filters capture particulates from continuous flow, low-volume air samplers that intake air at about the same height as a standing person
 - Gross alpha and gross beta results are comparable to similar samples collected elsewhere in Nevada
 - Gamma spectroscopy has identified only naturally occurring radionuclides except in 2011 when cesium-134 and -137 from Fukushima detected



Pressurized
Ion Chamber

Air sampler intake



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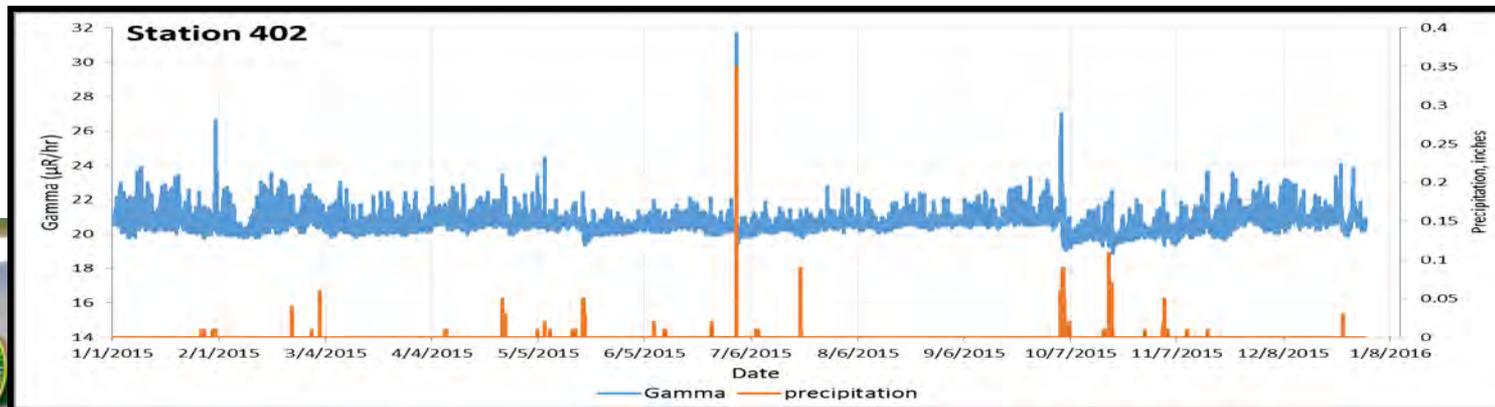
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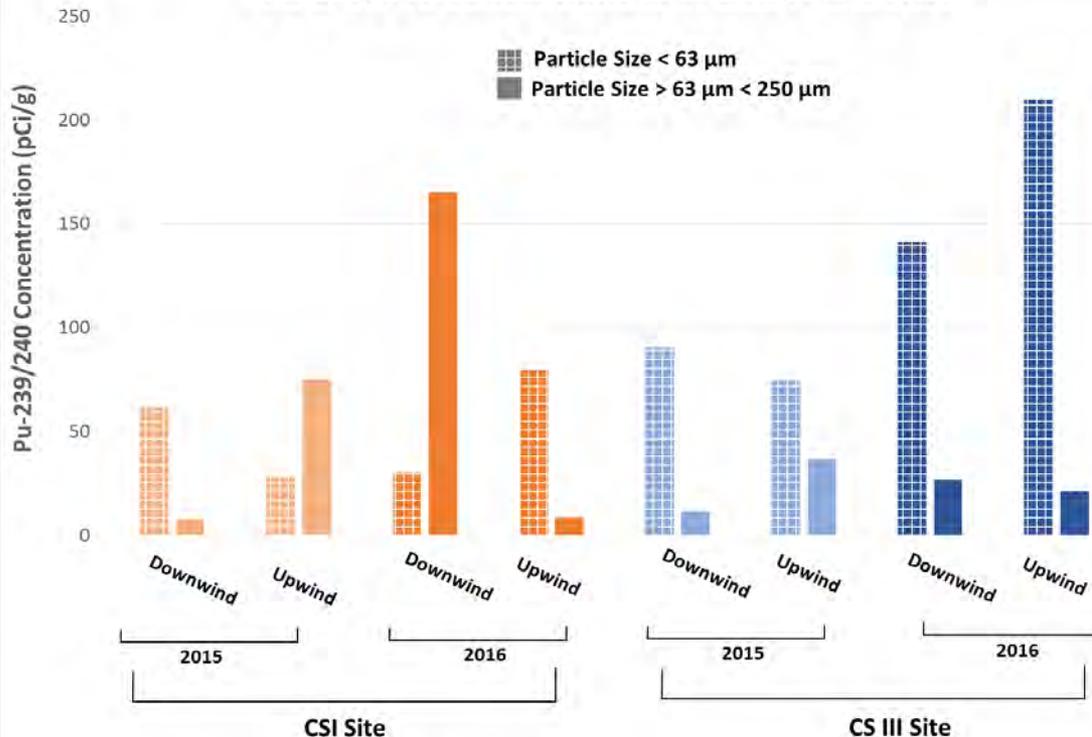
Radiologic Measurements (continued)

- Gamma exposure rate monitoring:
 - Gamma energy is continuously measured using a PIC
 - Mean gamma exposure rate is slightly higher than PIC measurements elsewhere in Nevada; could reflect altitude, latitude, geology
 - Spikes in gamma rate tend to coincide with rainfall, which washes out naturally occurring radioactive particles in the atmosphere



Radiologic Measurements (continued)

Pu-239/240 Concentrations at Clean Slate Sites



- Samples of saltating particles collected by traps:
 - Alpha spectroscopy analysis of ^{238}Pu , $^{239+240}\text{Pu}$, and ^{241}Am
 - *Generally* higher concentrations on smaller particles



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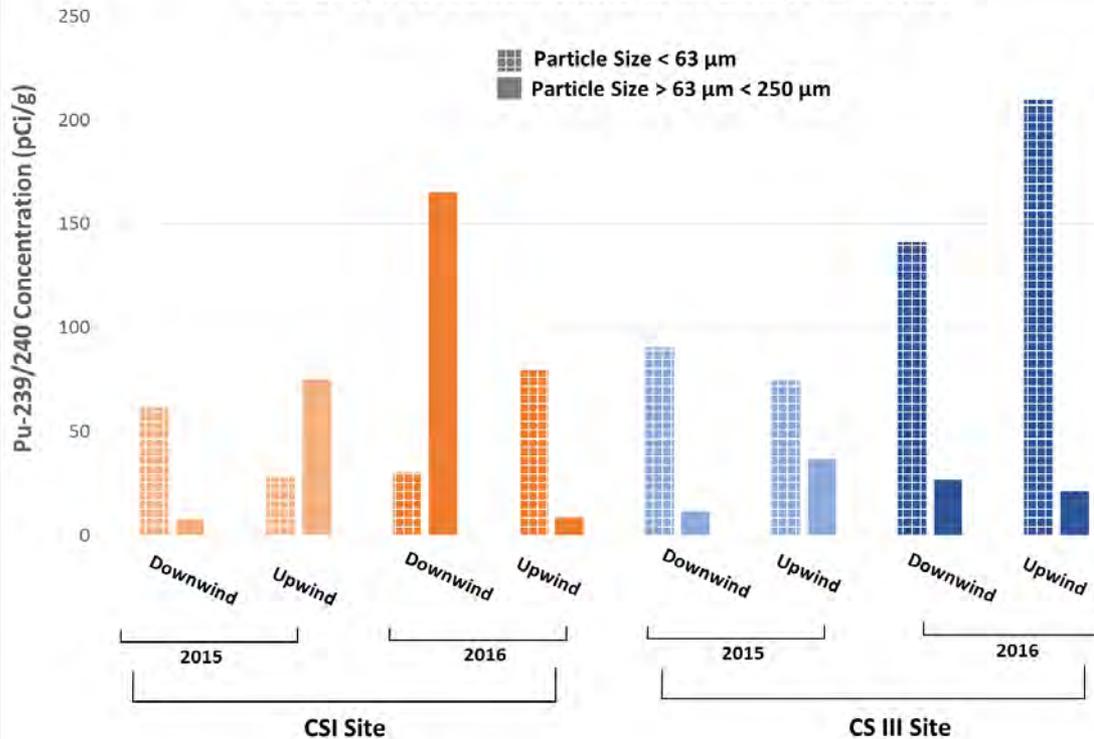
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Radiologic Measurements (continued)

Pu-239/240 Concentrations at Clean Slate Sites



- Concentrations are:
 - Higher than background, which is about 0.02 picocuries per gram (pCi/g) for $^{239+240}\text{Pu}$)
 - Lower than the 25 millirem per year action level, which for $^{239+240}\text{Pu}$ is 4,750 pCi/g



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Radiologic Measurements: Findings Recap

- Gross alpha and gross beta counts on filter samples are consistent with other samples from regional sites
- Gamma rate measurements in-situ are slightly higher than PIC measurements elsewhere, probably as a result of location and geology
 - Periodic spikes occur during precipitation events
- Gamma spectrometry has only detected natural radionuclides (other than during Fukushima); alpha spectroscopy not performed
- Plutonium and americium above background levels detected by alpha spectroscopy of material captured in saltation traps



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Monitoring Conclusions

- Migration of contaminated soil from Clean Slate I and III has not been detected in air filters and PICs
- Movement of plutonium and americium exceeding background concentrations is observed in saltation traps at concentrations at ~ 4 percent of action level
- Saltation and suspension of PM₁₀ size particles is observed for wind speeds exceeding 15-20 mph
- Winds in excess of 20 mph occur less than 2% of the time (about 170 hours in 2015)
- Highest winds are from the northwest, but the stations are downwind for south-southwest winds so samples are not collected from the strongest wind direction



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NSSAB Path Forward

Provide a recommendation, from a community perspective, on whether air monitoring stations on the TTR should be moved to different locations, maintained at the current locations, or the sampling approach modified



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Additional Background Slide(s)



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Current FFACO Status

- Clean Slate I (CAU 412)
 - 1997: Interim corrective action
 - 2015: Streamlined Approach for Environmental Restoration
 - September 15, 2016: Anticipating submittal of Closure Report to State of Nevada Division of Environmental Protection (NDEP)
- Clean Slate II (CAU 413)
 - May 19, 2016: Corrective Action Investigation Plan Rev. 1 approved by NDEP
- Clean Slate III (CAU 414)
 - April 28, 2017: Anticipating submittal of Corrective Action Investigation Plan Rev.1 to NDEP

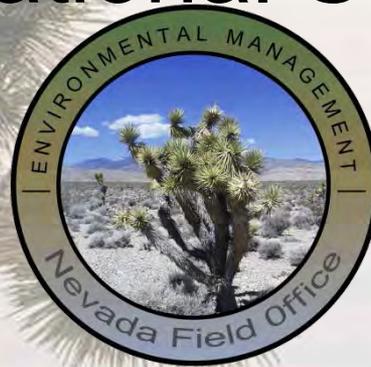


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Assessing Potential Exposure to the Public from Low-Level Waste Truck Transportation to the Nevada National Security Site



Julianne Miller

Division of Hydrologic Sciences, DRI
Nevada Site Specific Advisory Board (NSSAB)
July 20, 2016



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NSSAB Work Plan Item #9

From a community perspective, the NSSAB will provide recommendations on how waste transportation could be improved by the Department of Energy (DOE)



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Addressing Stakeholder Concerns

- What is the “radiation exposure” risk from a truck transporting low-level radioactive waste (LLW)?
 - Cumulative exposure for gamma radiation and alpha/beta emissions (mostly shielded by walls of trucks and containers)
- Risk of accidents on public highways
 - Concern to citizens in small towns where the highway is “Main Street”
 - During the study, LLW trucks used primary rural highway routes in states of Nevada and western Utah to reach the Nevada National Security Site (NNSS)



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Background: DRI LLW Truck Study

- Most potential exposure information presented to the public based on calculated exposures from models
- Truck measurements were not available
- DRI collected data using pressurized ion chamber (PIC) array stations in 2003 and published as a DOE report in 2005
- Additional analysis and data incorporated into an article for the Health Physics Journal, published in December 2007



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Measurements Collected from Trucks

- Participation was voluntary
- Semi-automated system designed to be cost-effective given remoteness of the site and 24-hour arrival of trucks
- Collected data
 - Measurements for 1,012 shipments between February and December 2003
 - Represented 47% of shipments to the NNSS during the study period
 - 10 of 18 generators participated in study
 - *No indication that any shippers purposely did not use PIC array*



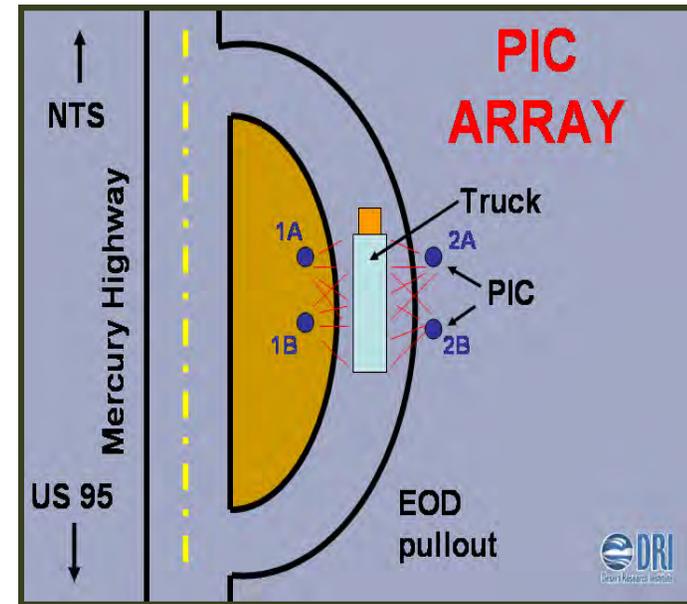
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Collecting Data for Potential Exposure

- Stationary and automated array of four PICs
- Position of PICs:
 - One meter (3.3 feet) from truck
 - Two on each side of array
 - 1.5 meter (4.9 feet) height
- Acoustic sensors were a second means of detecting a truck
- Array designed to simulate condition of a person standing on side of road next to truck



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Collecting Data for Potential Exposure

(continued)

- Amount of radioactivity can vary between waste containers
- Waste containers come in different shapes and sizes
- Highest of the four PIC measurements was used as the value for the truck



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Trucks with High Measurements

Greater than 800 Micro-Roentgens per Hour ($\mu\text{R/hr}$)

- Discovered after beginning of study that analog measurements on PICs unstable for readings greater than 800 $\mu\text{R/hr}$
- PICs did not auto scale to readings greater than 1,000 $\mu\text{R/hr}$
 - 59 trucks had one or more PIC readings greater than 800 $\mu\text{R/hr}$
- Remedy – Use measurements of trucks taken at waste disposal site for checking US Department of Transportation (DOT) compliance
 - Readings taken at 0.1 (contact), 0.3, and 1.0 meter (3.3 feet) from truck
 - Unidirectional gamma detector used
 - DOT requires that highest spot reading on truck be recorded



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Quality Assurance Check

- 58 of 59 trucks with readings greater than 800 $\mu\text{R/hr}$ at PIC array had readings at least as high at one meter at waste disposal site
 - One exception had reading of 750 $\mu\text{R/hr}$



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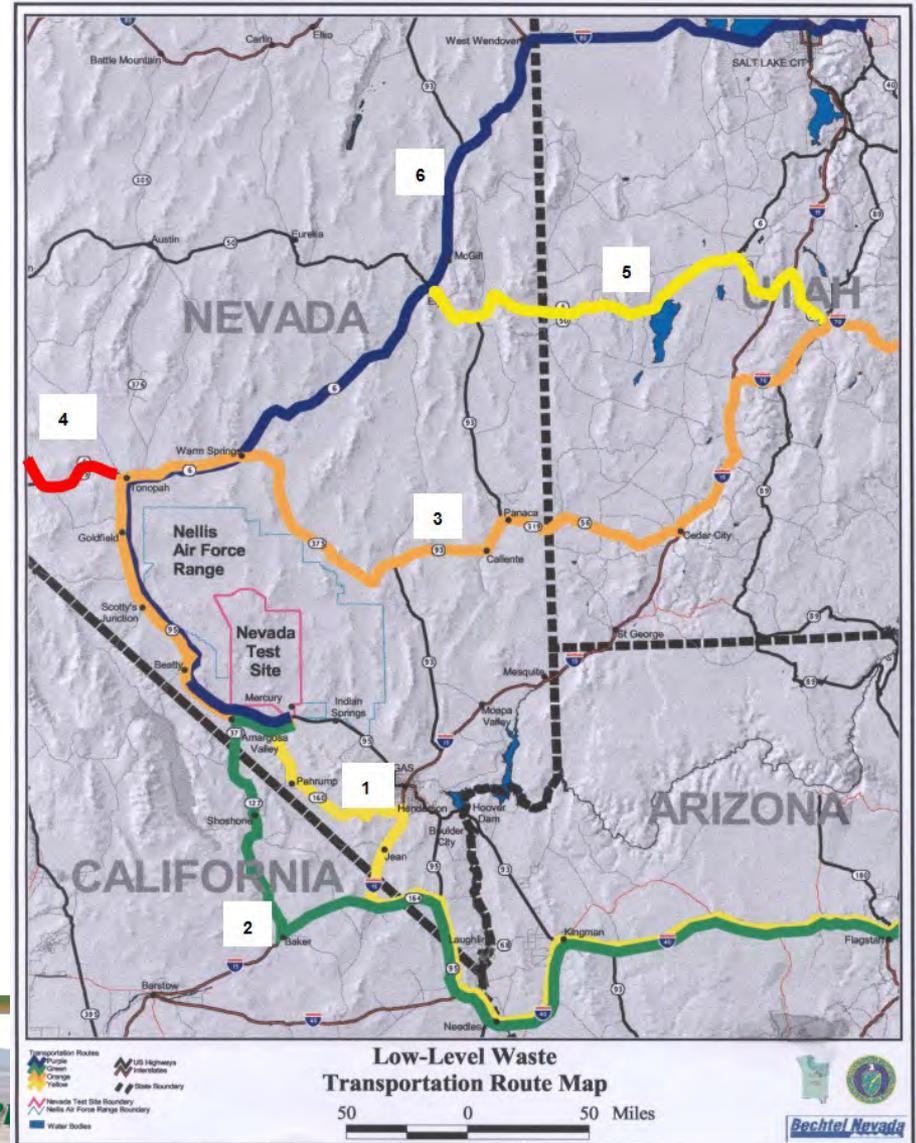
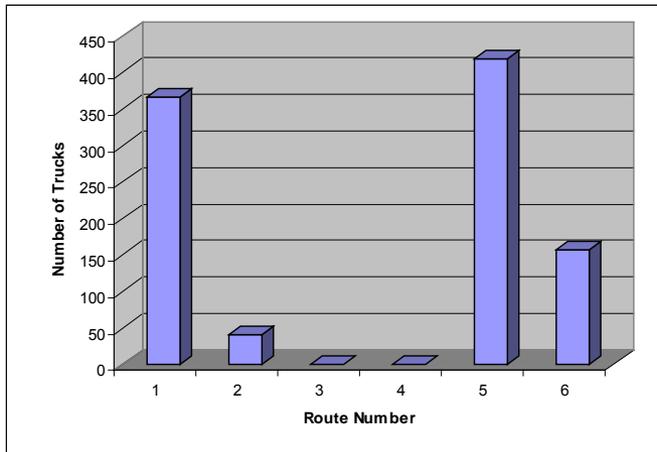
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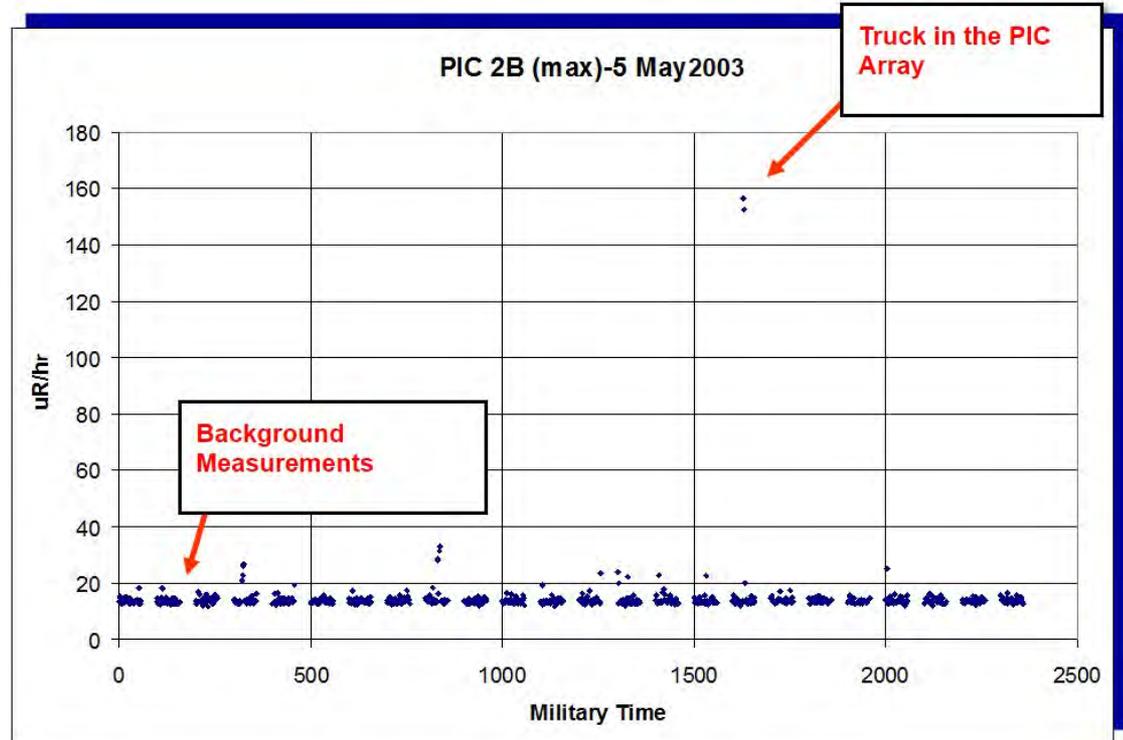
Determining Routes Used by Each Truck

- Based on Waste Shipment Identification Number for each shipment and logbook records
- Allowed for calculation of cumulative exposures for individuals along each route



Background Measurements

- Background radiation was usually between 10-15 $\mu\text{R/hr}$
 - Subtracted from truck readings



EM Environmental Management

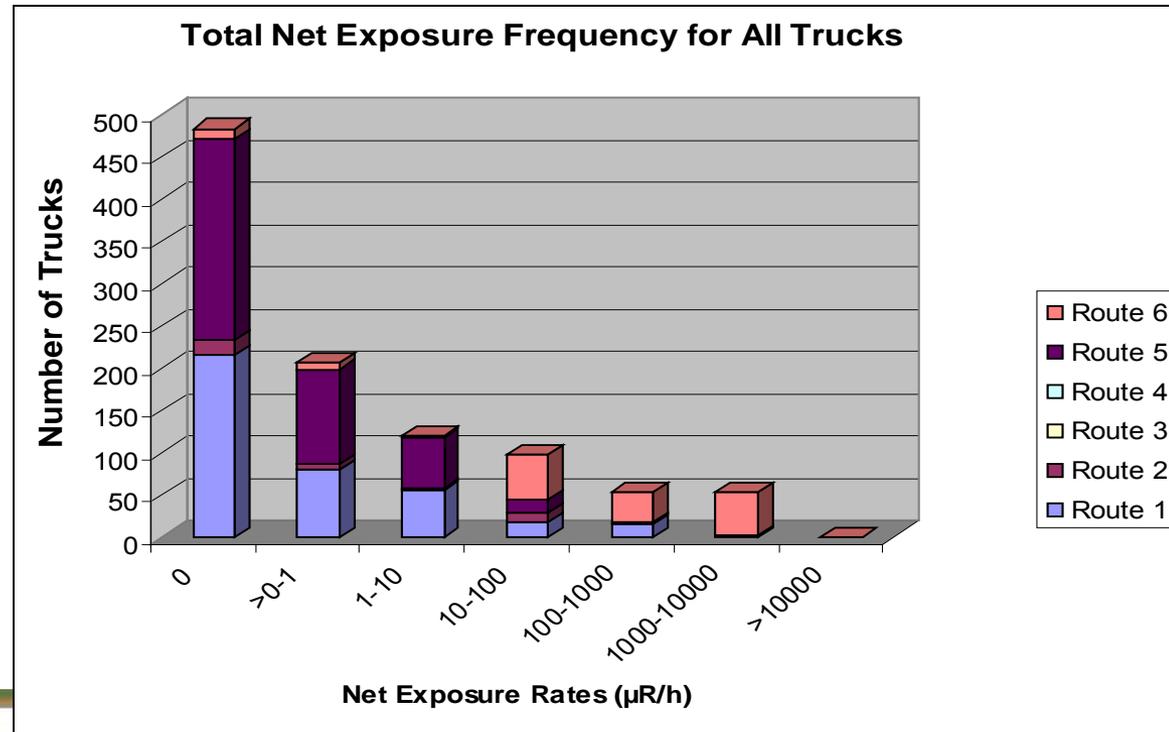
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Results

- 1,012 trucks measured
 - 483 (47.7%) of trucks could not be distinguished from background
 - 206 trucks (20.4%) were less than 1 $\mu\text{R/hr}$
 - Only 54 trucks (5.3%) exceeded 1,000 $\mu\text{R/hr}$ (or 1 millirem per hour [mR/hr]), and contribute the most to cumulative exposure calculations (DOT standard is 10 mR/hr or 10,000 $\mu\text{R/hr}$ at 2 meters)



EM Environmental Management

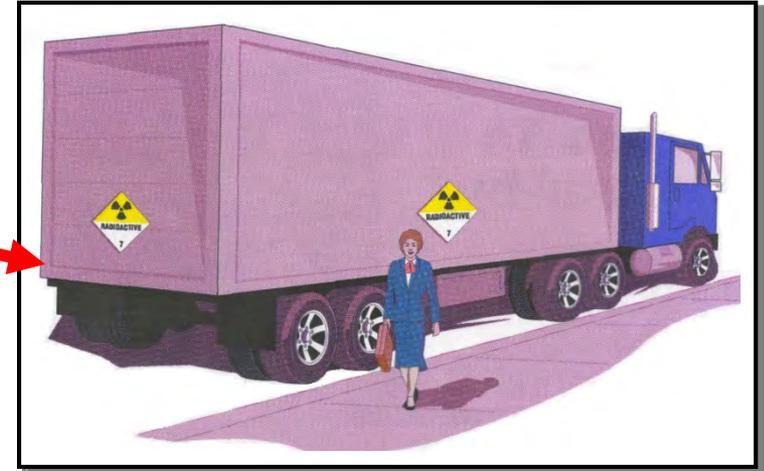
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Cumulative Exposure Scenarios

- Maximum calculated individual exposure* to a large number of trucks
 - Pedestrian scenario: walking 1 meter (3.3 feet) from truck for 15 seconds
 - Stoplight scenario: parked 1 meter from truck for 1 minute at stoplight
 - Fueling scenario: dispensing fuel 1 meter from truck for 30 minutes
 - Goldfield scenario: Receptors located within 5 meters (16.4 feet) of highway when truck stops for 1 minute at stop sign



*assumes same person for all exposures in each scenario in each town



Total Exposures (μR) for Each Scenario

Route	Town	No. of Trucks	Pedestrian	Stoplight	Fuel Attendant	Goldfield
			15-sec @ 1 m	1 min @ 1 m	0.5 hr @ 1 m	1 min @ 4.9 m
1	Pahrump, NV	384 [†]	16	63	1,892	--
2	Amargosa Valley, NV	41 [†]	3	12	364	--
3	Caliente, NV	0	0	0	0	--
4	Tonopah, NV	0	0	0	0	--
5	Delta, UT/ Ely/ Tonopah, NV	425	29	117	3,510	--
6	Salt Lake City, UT/ Ely/ Tonopah, NV	162	806	322	96,692	--
5/6*	Ely/Tonopah, NV	587 [†]	835	3,340	100,202	--
n/a	Goldfield, NV	587	--	--	--	370
All	PIC Array	1,012 [†]	854	3,150	102,458	--

assumes same person for all exposures in each scenario in each town



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Cumulative Exposures

- Could be strongly influenced by a small percentage of trucks
- Amargosa Valley route for “pedestrian” exposure scenario
 - Same person is exposed to all 41 trucks for a period of 15 seconds
 - Total exposure from all trucks: 3.04 μR
 - Exposure after removing truck with highest rate: 1.96 μR (highest rate = 259.20 $\mu\text{R/hr}$)
 - *Result: 35% reduction in total exposure!*



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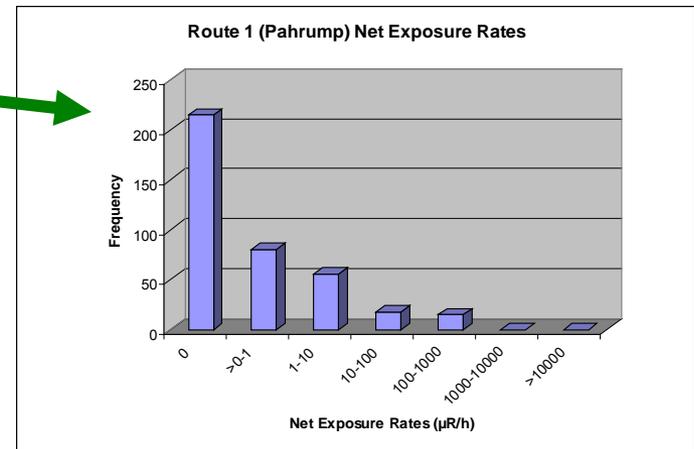
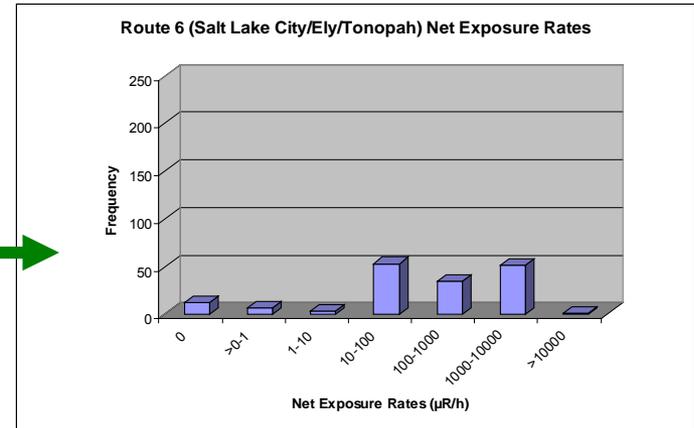
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More Trucks Do Not Equal Higher Exposure

- Example assumes exposure of 1 hour at 1 meter:
 - Route 6 through Salt Lake City, Utah, and Ely, Nevada
 - 162 trucks with 193,000 μR total net exposure
 - Route 1 through Pahrump, Nevada
 - 384 trucks with 3,800 μR total net exposure



Although more trucks traveled on Route 1, the total radiation exposure was much lower than on Route 6



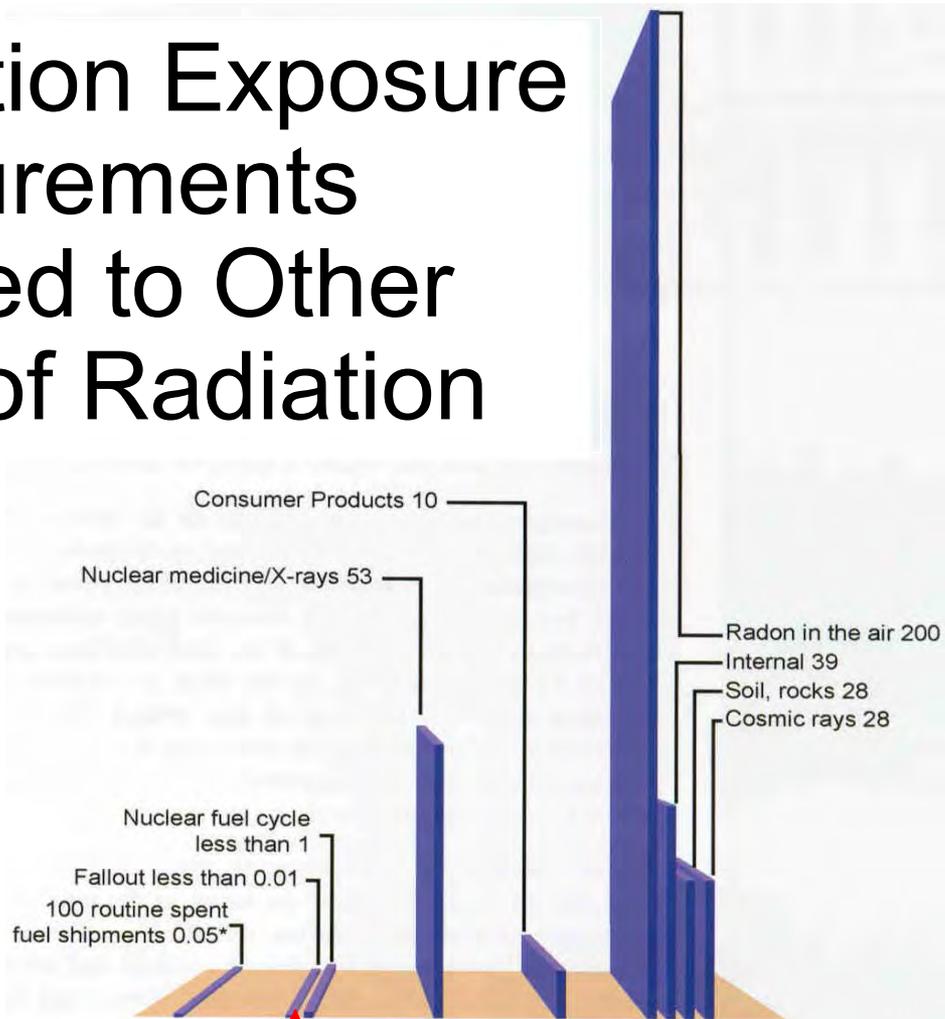
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Transportation Exposure Measurements Compared to Other Sources of Radiation



Units are in 1,000 μ R or 1 mR

Highest cumulative pedestrian exposure scenario – 800 μ R or 0.8 mR



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Conclusions

- About 70% of trucks had no net exposure or were less than $1 \mu\text{R/hr}$ ($1 \mu\text{R/hr} = 1/10,000$ of the DOT shipping standard)
- 54 trucks with exposures greater than $1,000 \mu\text{R/hr}$ at 1 meter dominate cumulative exposure calculations, but comply with DOT standards
- No trucks exceeded any DOE or DOT standards



(DOT standard is 10 mR/hr
or 10,000 $\mu\text{R/hr}$ at 2 meters)



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Closing

- Largest study ever conducted on potential exposure from trucks during transit
- Identifying range of potential exposures better than averaging
- Data collected in 2003 and published in 2005
 - *Assessing Potential Exposure from Truck Transport of Low-Level Radioactive Waste to the Nevada Test Site* (DRI 45208; DOE/NV/13609-37) <http://www.osti.gov/scitech/biblio/860982-assessing-potential-exposure-from-truck-transport-low-level-radioactive-waste-nevada-test-site>
- Additional analysis and data incorporated in Health Physics Journal article published December 2007
 - *Characterizing Potential Exposure to the Public from Low-Level Radioactive Waste Transportation by Truck.* Health Physics Journal, Vol. 93, No. 6, December 2007



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NSSAB Path Forward

From a community perspective, the NSSAB will provide recommendations on how waste transportation could be improved by the Department of Energy



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Shipments to the Nevada National Security Site (NNSS) Area 5 Radioactive Waste Management Complex (RWMC)

**Scott Kranker,
Radiological Program Waste Manager
National Security Technologies, LLC**

**Nevada Site Specific Advisory Board
July 20, 2016**

T100EEU042307

Area 5 Receiving Process (continued)

- Trained and qualified Radiological Control Technicians conduct surveys in accordance with established procedures:
 - SOP-2151.203, *Low-Level Waste Handling and Storage Program*
 - Radiological procedure SOP-0441.211, *Direct and Indirect Surveys*
- Dose rate is measured at the trailer surface with calibrated Ludlum Model 3 or NE Electra instruments
- Dose rate data is recorded on FRM 0108, *Radiological Survey Report*



T100EEU042307

Process for Disposal: Permanent Burial



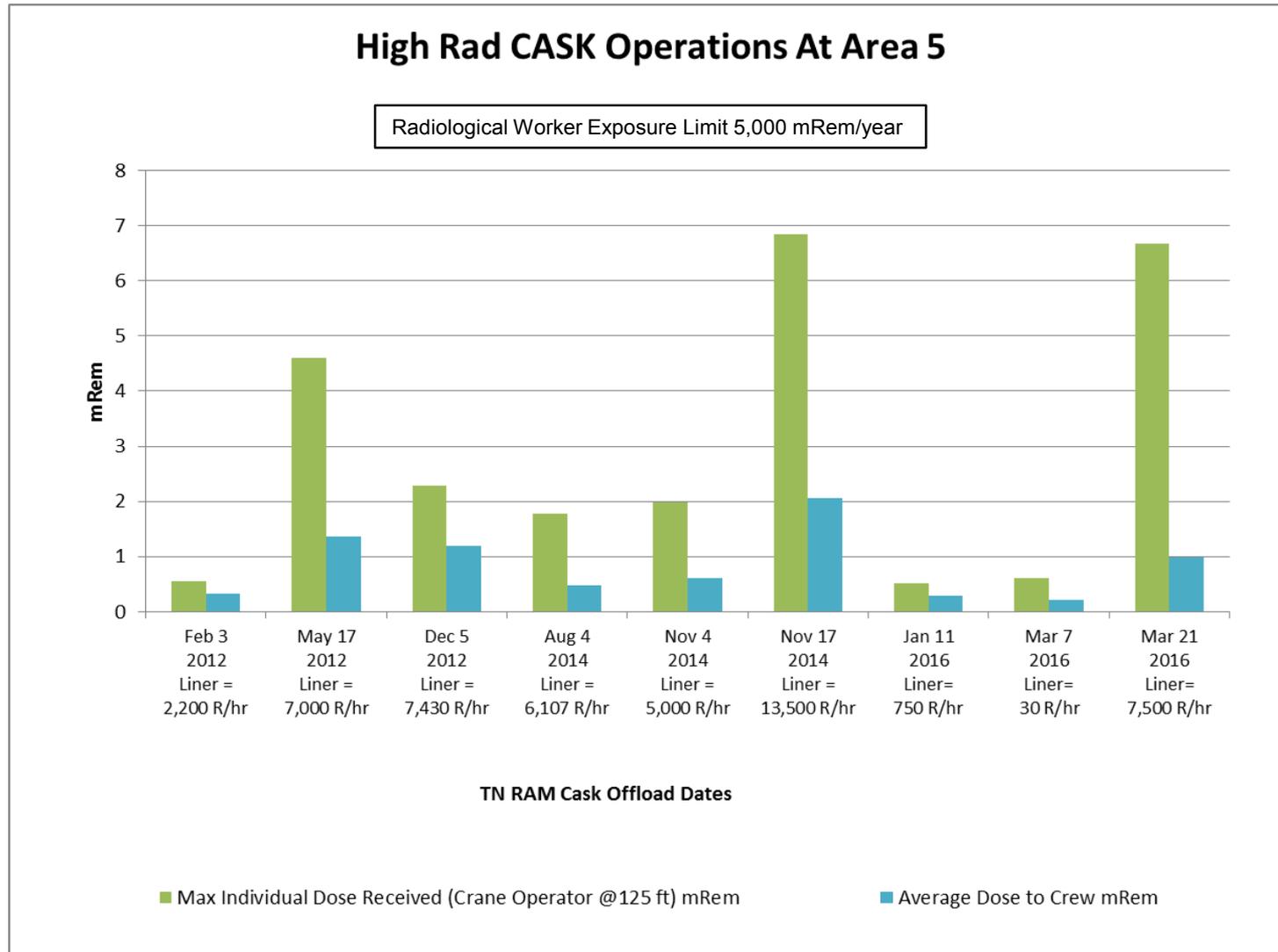
- After surveys are performed, containers are placed into the disposal cell
- The container barcode is scanned and identified with its position within the grid system of the cell
- Four feet of operational cover is placed on top of the waste
- When the cell is full, an additional four feet of native material cover is placed on the cell as the final closure cap



TN RAM Cask

T100EEU042307

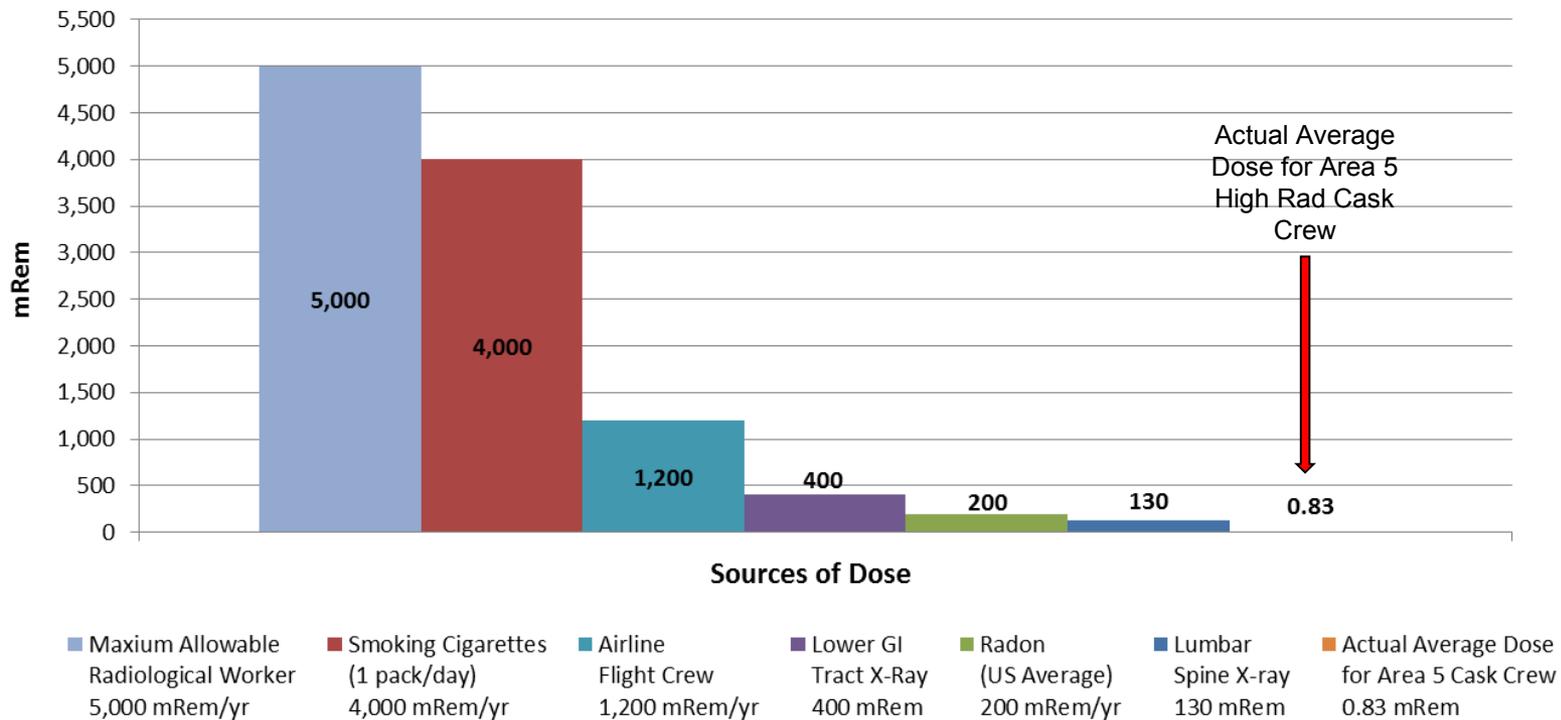
High Rad Cask Shipment Dose Rates



T100EEU042307

Common Dose Comparison

Examples of Possible Doses from Common Sources



T100EEU042307

In Summary

- Exposure limit for a radiological worker is 5,000 mRem per year
- Average dose per worker on High Rad shipments at the NNSS is .83 mRem
- Average dose per worker at the NNSS in 2015:
 - 53 monitored personnel
 - 202 mRem total
 - 3.81 mRem per person
- Team member involvement and process improvement has increased efficiencies and reduced the dose rate to the workers
- More than 36,000 hours of safe operations since last lost time accident at Area 5

T100EEU042307

Low-Level Waste (LLW) Transportation Overnighting



Rob Boehlecke

Environmental Management Operations Manager
U.S. Department of Energy
Nevada Site Specific Advisory Board
July 20, 2016



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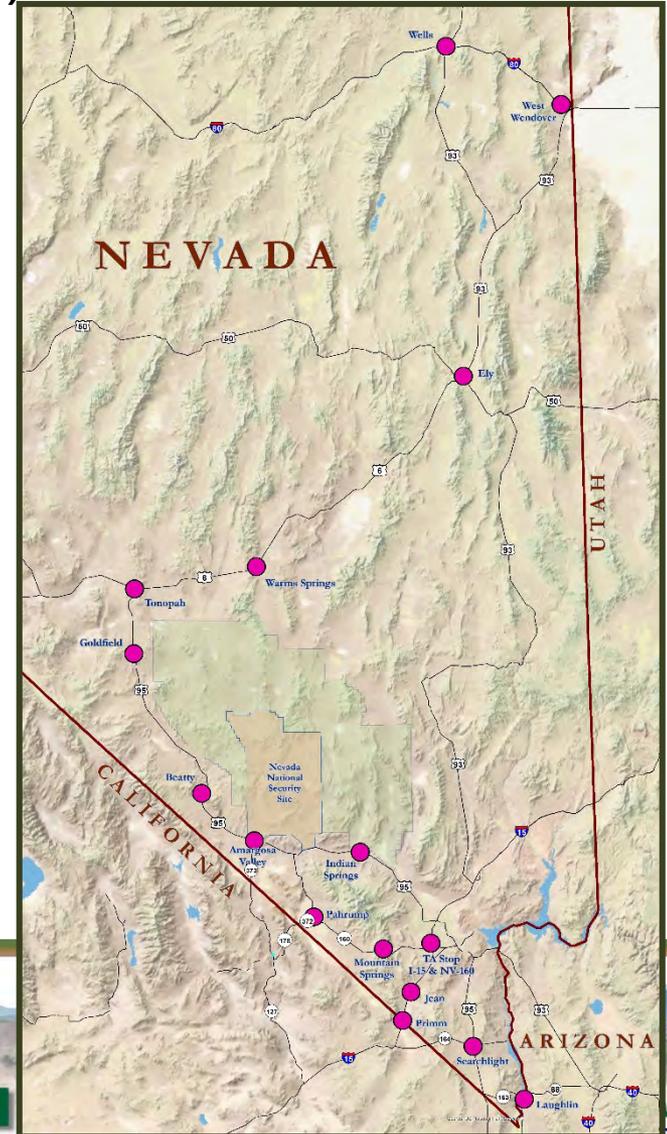
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Shipment Stops within Nevada

(pink dots on map)

- Stakeholders requested information on shipments parked at local businesses
- Between July 2014 and June 2016, some of the 2,678 shipments en route to NNSS either overnighted or stopped for breaks in Nevada
 - 20% of shipments (543) overnighted – majority at Primm (172) or Pahrump (121)
 - 26% of shipments stopped for a break (706); top three stops were Wells (211), Primm (135), and I-15/NV-60 interchange south of Las Vegas (127)
- Nevada Field Office working with carriers to make notifications when there are extended stops within Nevada

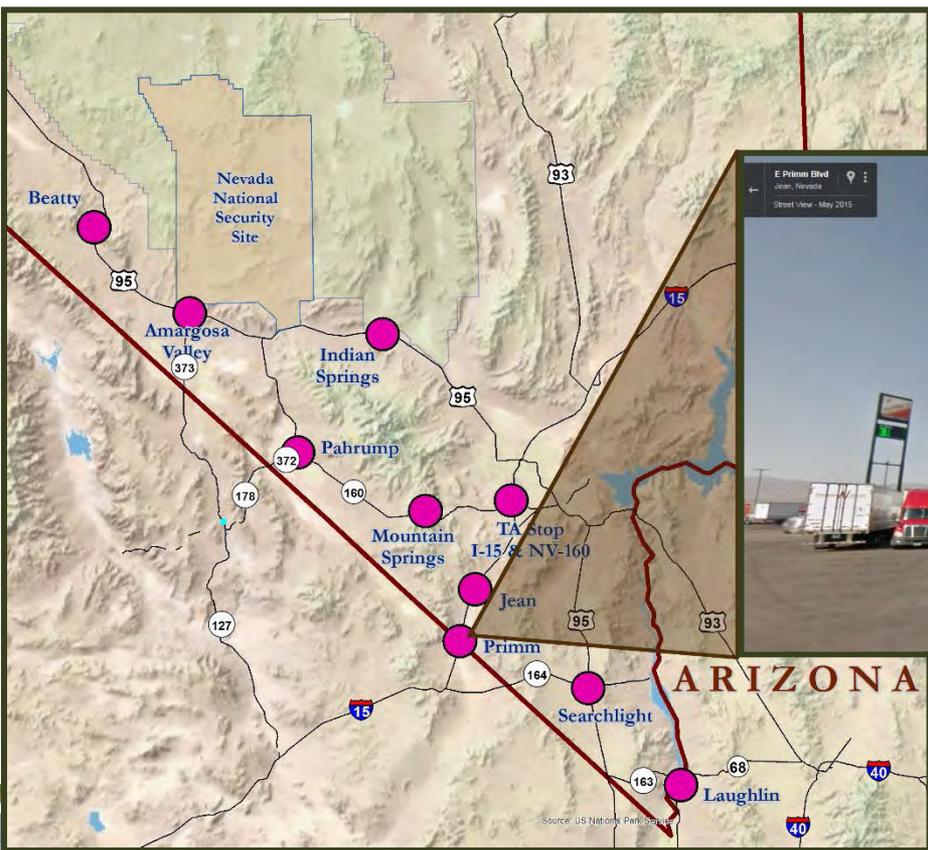


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Primm, NV

- Most often used by drivers to overnight within Nevada
- Second most often used location for drivers taking breaks within Nevada

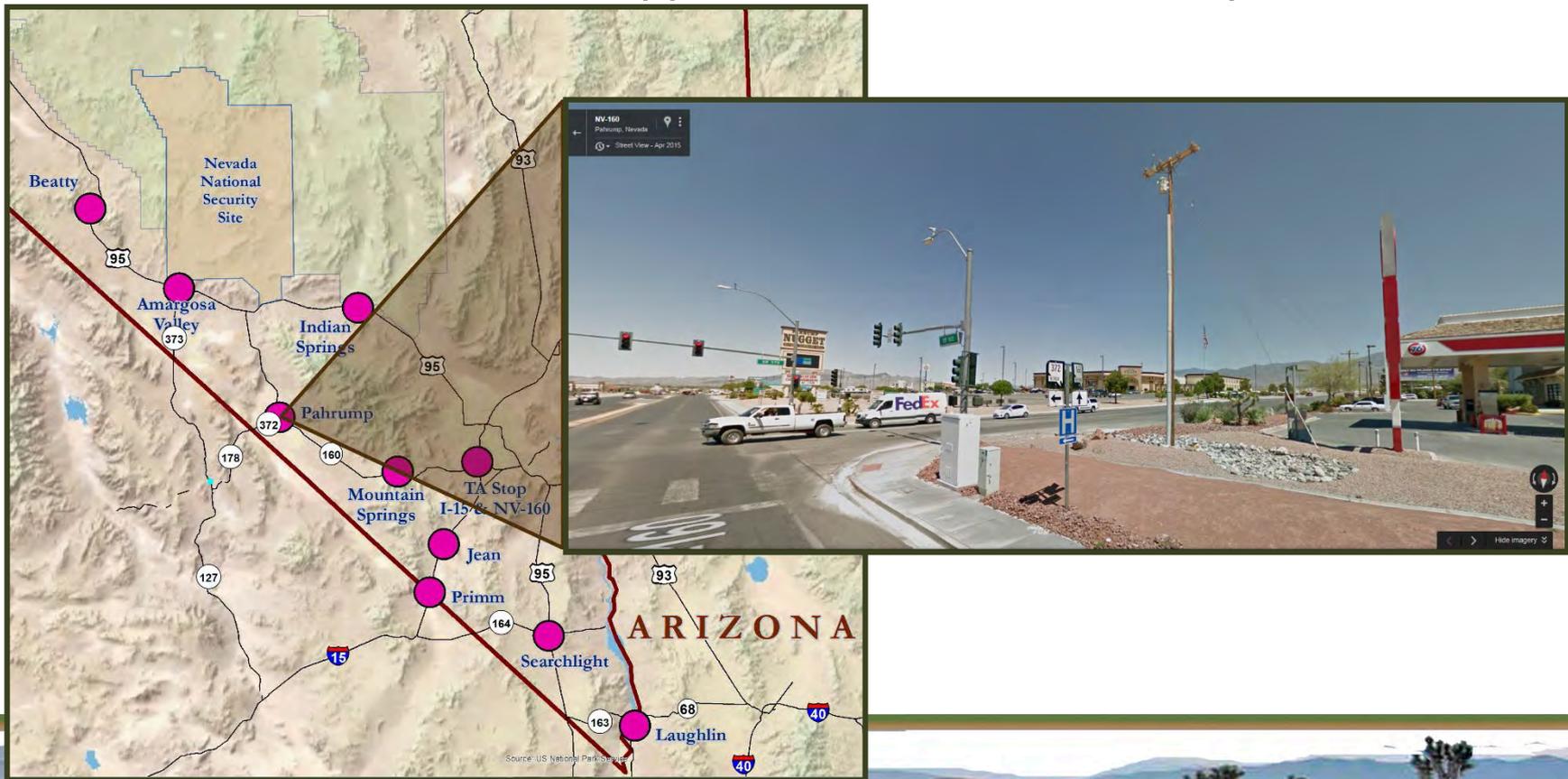


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Pahrump, NV

- Second most often used location for drivers to overnight within Nevada
- Less than 1% of drivers stopped for a break in Pahrump

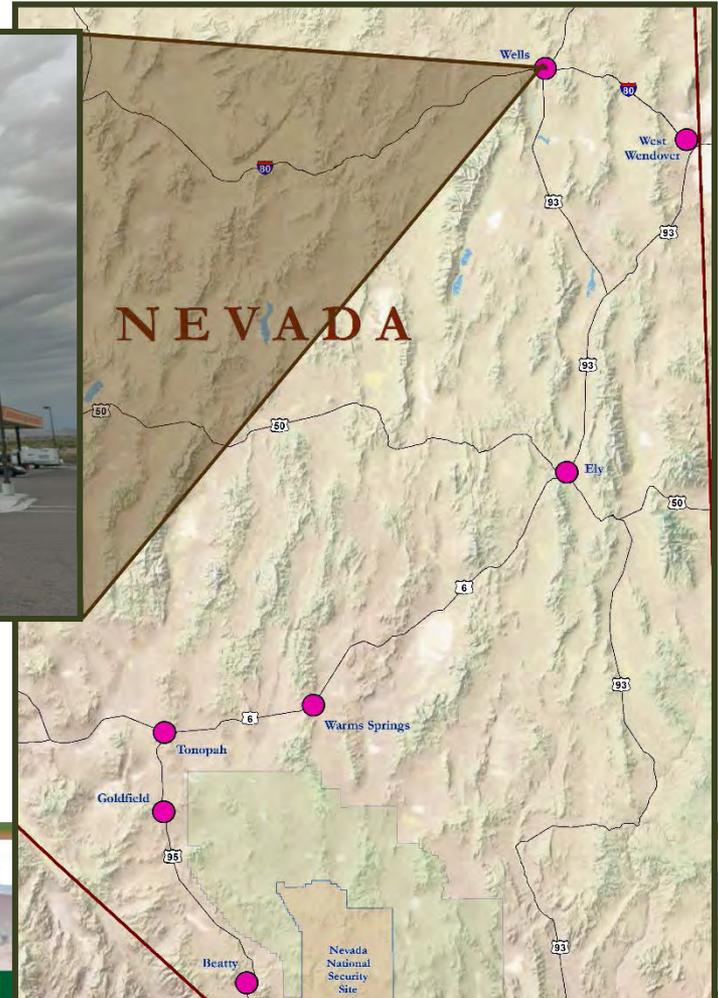


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Wells, NV

- Most often used location for drivers to take a break within Nevada
- Only one shipment overnighted in Wells

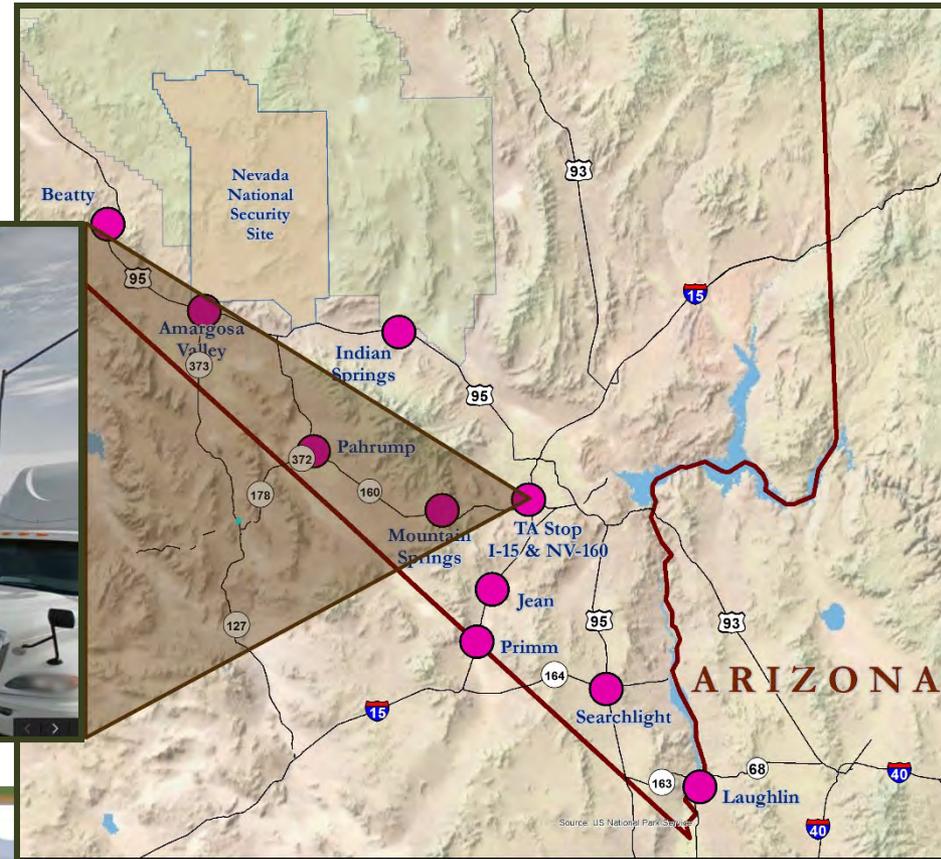


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I-15/NV-160 Interchange

- Third most often used location for drivers to take a break
- Less than 1% of drivers overnighted



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Options for Shipment Drivers

- NNSS provides several options to assist transporters who need to drop a trailer load or stay overnight at the site
 - Drivers can overnight at the Mercury Gate 100 (must stay with vehicle)
 - Drivers can drop their trailer load with shipping paperwork in the Desert Rock Drop Yard overnight (not secured) and return the next morning for delivery to the Area 5 Radioactive Waste Management Site
 - Dorm rooms available for drivers to overnight in Mercury
- NNSS options encouraged to avoid waste shipments parked in a public area (e.g. hotels, truck stops, etc.) any longer than necessary
- NNSS recognizes driver safety/Department of Transportation requirements take priority



Notifications

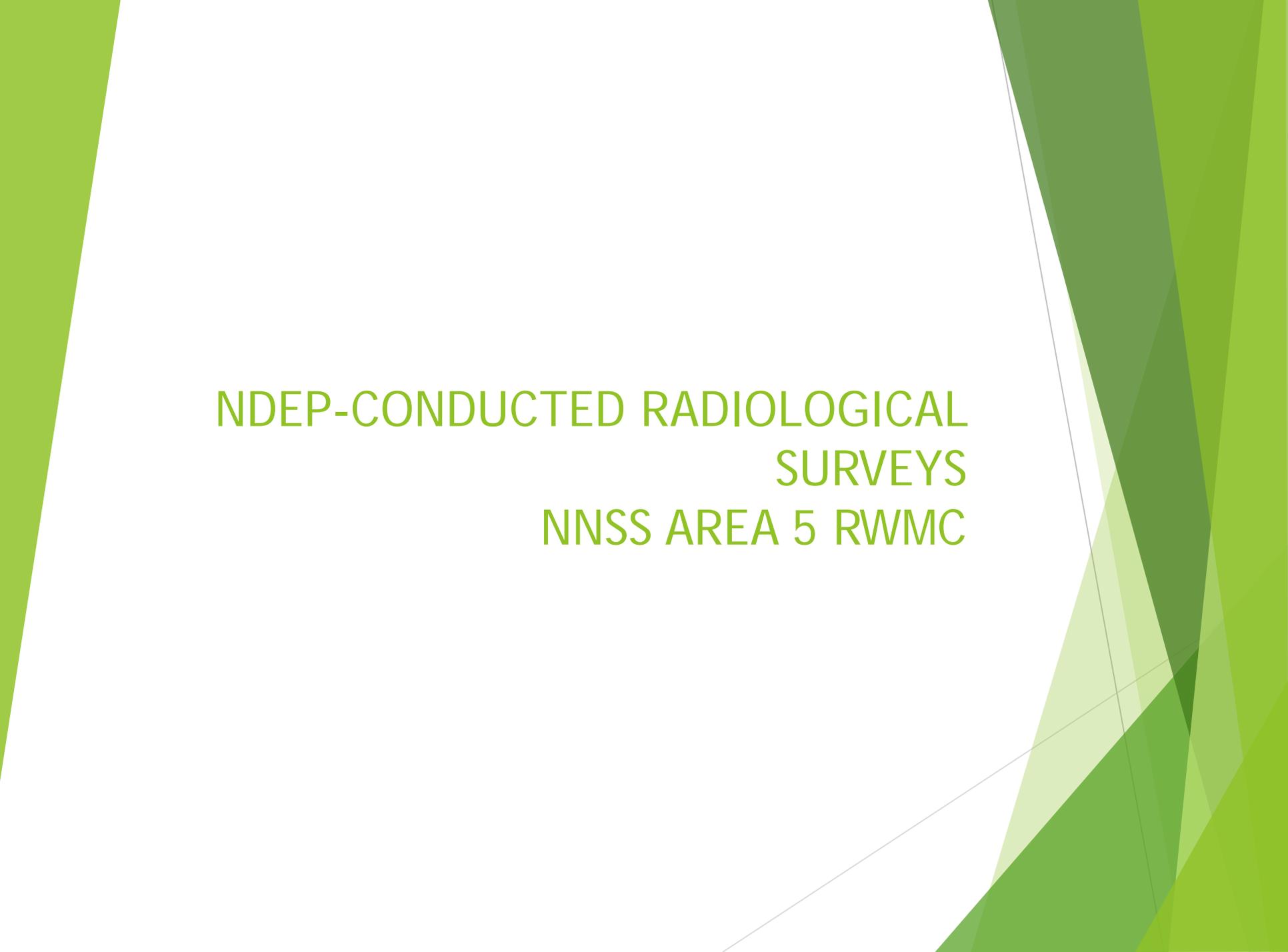
- Currently, NNSS Waste Acceptance Criteria (WAC) requires notification to the Nevada Field Office when there is a transportation incident or emergency situation
- Nevada Field Office is working on revisions to NNSWAC, including enhanced notification requirements
 - Requirement for generator sites to add notification clause in contracts with carriers
 - Carriers to provide written direction to each affected driver identifying events that require notification
 - Drivers instructed to provide notification within one hour of event, with sufficient detail, to the motor carrier's dispatch operation
 - Motor carrier's dispatch operation instructed to provide notification within one hour of notification by the driver, with sufficient detail, to the NNSS Operations Command Center

NOTE: NNSS Management & Operating contractor will establish procedures for gathering event-related information and making formal notifications



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The background features abstract, overlapping green geometric shapes in various shades, including light lime green, medium green, and dark forest green. These shapes are primarily located on the left and right sides of the page, framing the central white area.

NDEP-CONDUCTED RADIOLOGICAL
SURVEYS
NNSS AREA 5 RWMC

BACKGROUND

- ▶ UNDER NDEP/DOE AGREEMENT-IN-PRINCIPLE (AIP) SECTION X, LLW JOINT OVERSIGHT, NDEP SUB-CONTRACTED WITH STOLLER NEWPORT NEWS NUCLEAR (SN3) TO CONDUCT RADIOLOGICAL SURVEYS ON INCOMING RADIOACTIVE WASTES AT NNSS AREA 5 RWMC.

OBJECTIVES

- ▶ TO MEASURE RADIATION DOSE RATES FROM RADIOACTIVE WASTE PACKAGES ARRIVING AT NNSS AREA 5 RWMC AND ASSESS FOR DOT- AND NNSSWAC- COMPLIANCE.
- ▶ TO CONFIRM/VERIFY THE PRESENCE OR ABSENCE OF REMOVABLE RADIOACTIVE CONTAMINATION ON RADIOACTIVE WASTE PACKAGES AND TRUCKS USED IN TRANSPORTING THE WASTE PACKAGES TO NNSS AREA 5 RWMC.

REQUIREMENTS/REGULATIONS

- ▶ 49 CFR 173 (DOT) ESTABLISHES THE FOLLOWING REQUIREMENTS:

1. RADIATION LEVEL LIMITS FOR RADIOACTIVE MATERIALS TRANSPORTED BY ROAD;

2. MAXIMUM PERMISSIBLE LIMITS FOR NON-FIXED (REMOVABLE) RADIOACTIVE CONTAMINATION ON TRANSPORTED PACKAGES.

REQUIREMENTS/REGULATIONS (49 CFR 173/DOT)

- ▶ RADIATION LIMIT FOR PACKAGES TRANSPORTED BY ROAD,
ON PACKAGE SURFACE:
 - ▶ 2 mSv/h (200 mrem/h) OTHER THAN CLOSED
VEHICLES;
 - ▶ 10 mSv/h (1000 mrem/h) CLOSED VEHICLES

- ▶ PERMISSIBLE LIMITS FOR REMOVABLE RADIOACTIVE
CONTAMINATION ON PACKAGES TRANSPORTED BY ROAD:
 - ▶ 22 dpm/sq.cm alpha-emitting;
 - ▶ 220 dpm/sq.cm beta-gamma emitting

REQUIREMENTS/REGULATIONS (DOE)

- ▶ NEVADA NATIONAL SECURITY SITE (DOE) RADIOLOGICAL CONTROL MANUAL, Rev. 2, 2012 (DOE/NV/25946-801), CHAPTER 4, PART 2, ARTICLE 423.4c ESTABLISHES REQUIREMENTS THAT ARE IN CONFORMANCE WITH 49 CFR FOR RADIATION DOSE RATES AND LIMITS FOR REMOVABLE CONTAMINATION.

RADIOLOGICAL SURVEYS

- ▶ EACH RADIOLOGICAL SURVEY CONSISTS OF MEASURING RADIATION DOSE RATES OF INCOMING WASTE PACKAGES USING A HAND-HELD MICRO "R "METER (at surface, 30-cm., and 1-meter)
- ▶ EACH SURVEY ALSO INCLUDED COLLECTING SWIPE SAMPLES FROM WASTE PACKAGES FOR DIRECT COUNT (cpm/dpm) OF REMOVABLE ALPHA- AND BETA-CONTAMINATION / RADIOACTIVITY POTENTIALLY PRESENT ON THE WASTE PACKAGES AND TRANSPORTING VEHICLES.

SURVEY RESULTS

- ▶ MONTHLY RADIOLOGICAL SURVEYS BY SN3/NDEP BEGAN IN OCTOBER 2015 AND ARE ONGOING.
- ▶ MEASURED BACKGROUND ACTIVITIES FOR ALPHA- AND BETA/GAMMA AT THE AREA 5 RWMC RANGE FROM 0.5-1.5 dpm/sq.cm and 90-120 dpm/sq.cm, RESPECTIVELY.

SURVEY RESULTS

- ▶ SURVEYS CONDUCTED TO DATE HAVE INDICATED THAT RADIATION DOSE RATES OF WASTE PACKAGES ARRIVING AT NNSS AREA 5 RWMC ARE WELL BELOW DOT LIMITS OF 200mrem/h (49 CFR 173.441).
- ▶ SURVEYS CONDUCTED TO DATE HAVE CONFIRMED THAT WASTE PACKAGES ARRIVING AT NNSS AREA 5 RWMC ARE FREE OF ANY SUBSTANTIAL REMOVABLE ALPHA- AND BETA-GAMMA RADIOACTIVE CONTAMINATION (less than 22 dpm/sq.cm alpha, less than 220 dpm/sq.cm beta-gamma)

CONCLUSIONS

- ▶ TO DATE, RADIOLOGICAL SURVEYS CONDUCTED BY NDEP/SN3 ON INCOMING RADIOACTIVE WASTE SHIPMENTS TO THE NNSS AREA 5 RWMC HAVE CONFIRMED THAT RADIATION DOSE RATES AND LEVELS OF REMOVABLE RADIOACTIVE CONTAMINATION ASSOCIATED WITH WASTE PACKAGES ARE IN COMPLIANCE WITH DOT- AND DOE- REGULATIONS FOR TRANSPORT OF RADIOACTIVE MATERIALS.
- ▶ COPIES OF ACTUAL SURVEY REPORTS AND DATA/MEASUREMENTS ARE AVAILABLE UPON REQUEST
- ▶ FOR MORE SPECIFIC INFORMATION, CONTACT JOHN WONG AT (702) 486-2850.

COMMENTS, QUESTIONS?



Protecting Against Radiation Exposure

All U.S. Department of Energy activities are performed in a manner that protects workers and the public from harmful exposure to radiation. In addition, packaging and transportation of all radioactive materials must be conducted in accordance with U.S. Department of Transportation (DOT) regulations.*

DOT Maximum Dose Limits: "Closed" Exclusive-Use Vehicle



1,000
mrem/hour

At contact – Waste package inside trailer
(Direct contact prohibited)



2
mrem/hour

Driver in cab



200
mrem/hour

At contact – Truck

10
mrem/hour

At 2 meters (6.6 feet)

DOT Maximum Dose Limit: Service Attendants

Scenario:
Attendant Fueling Truck



50
mrem total

For 15 minutes of exposure
for a 200 mrem/hour dose
on contact with truck
transporting waste

DOT Maximum Dose Limit: Passers-By

Scenario:
Truck stopped in traffic;
pedestrian walks by trailer
on sidewalk



0.04
mrem total

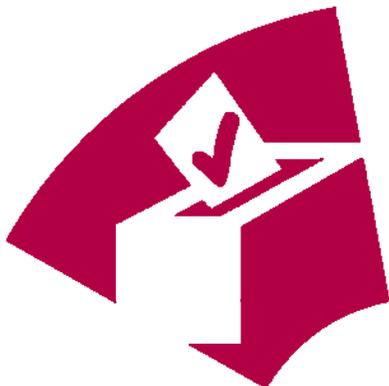
For 15 seconds of exposure
for a 10 mrem/hour dose at
a distance of 2 meters (6.6 ft)

*10 CFR Part 71 and 49 CFR 1910



U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office

FY 2017 Election Time



Elections of the FY 2017 NSSAB Chair and Vice-Chair will take place at the September Full Board meeting. A response is needed from all. Please contact the NSSAB office by August 30 and advise if you would like to be considered for either position.

You may also nominate someone who you feel would be a valuable chair/vice-chair. Anyone nominated will be contacted to ensure they would accept the nomination. A list of interested members will be provided to the Full Board and the officers will be elected by ballot at the September Full Board meeting.

What are the Chair responsibilities?

- Serves as the Chair for 12 months (October 1 - September 30)
- Participates in bi-monthly EM SSAB Chairs conference calls
- Assists in the development of draft meeting agendas
- Leads full board meetings and ensures all members have the opportunity to participate
- Certifies to the accuracy of all minutes within 45 days
- Signs recommendations that the Board has passed
- Serves as spokesperson for the NSSAB between regular meetings of the Board
- Attends national EM SSAB meetings and/or workshops semi-annually
- Attends quarterly meetings with EM Management
- Adheres to all standard NSSAB member responsibilities (i.e. attendance requirements, etc.)

What are the Vice-Chair responsibilities?



- Serves as the Vice-Chair for 12 months (October 1 - September 30)
- Participates in bi-monthly EM SSAB Chairs conference calls
- Assists in the development of draft meeting agendas
- Acts as the NSSAB chair in the absence of the elected chair
- Attends national EM SSAB meetings and/or workshops semi-annually
- Attends quarterly meetings with EM Management
- Adheres to all standard NSSAB member responsibilities (i.e. attendance requirements, etc.)

Please contact the NSSAB office by August 30 and advise if you are willing to be considered for the FY 2017 Chair and/or Vice-Chair positions.

PROPOSED PRESENTATION FOR 2016 FALL CHAIRS ROUND ROBIN

The Nevada National Security Site Advisory Board continually strives to provide opportunities to engage the communities surrounding the Nevada National Security Site. It is the Board's opinion that we need to increase and enhance that outreach effort.

The communities surrounding the Nevada National Security Site span a distance of over 300 miles and are situated from North to South along U S Highway 95, which is a rural two lane highway, and in no way similar to Interstate 95 on the East Coast. The southern Nevada communities, excluding Las Vegas, represent population sizes from 300-40,000. The communities are rural, they are not contiguous, and each is at least an hour's drive from the Nevada National Security Site. Farming and ranching are among the occupations common in the area. Our current Board members represent 8 of these rural communities.

Past NNSAB outreach efforts to the rural communities have included:

- Attending Community Environmental Monitoring program
- Attending Groundwater Workshops and training
- Representing the Board on the Nevada Field Office Low Level Waste Stakeholder Forum
- Participation in quarterly meetings with EM senior Management and State of Nevada regulator
- Observing drilling of a new well during a public groundwater-focused tour
- Participation in intergovernmental meetings with NNSAB liaisons
- Attend RadWaste Summit, Waste Management Symposia and Transportation conferences
- Observing assessments of the radioactive waste acceptance program
- Observing National Transportation and tabletop exercises in Clark and Nye counties
- Staffing an NNSAB booth at Department of Energy open houses in rural communities
- Supporting membership recruitment drive efforts, including an interview on local television station

These outreach activities are a two-way street. Board members gain new information and make new contacts which, in turn, they are able to use to benefit and inform their individual communities. We have tried to attract all age groups to both our Board and to citizens we try to reach. We recognize that older citizens have more time and experience; younger people have more enthusiasm and newer ideas. We also want to engage current students who will probably be the source of new technologies to treat radioactive waste.

With all these outreach activities, we are constantly amazed that many southern Nevada residents are still unaware of the Nevada National Security Site: its history, its current mission, and its current environmental remediation and monitoring activities. Much of the lack of information can be attributed to the security issues present during the Cold War. The long term effect of not talking about what happened at the Test Site, however, has resulted in a void that has been filled by a host of legendary

beings and effects, some on which still remain. We believe a greater presence of current knowledge is the way to dispel those legends.

The Nevada National Security Site Advisory Board feels that the Department of Energy should have a bigger informational platform in Southern Nevada and a more robust collaboration with the local communities. Specifically, we request support and funding for community education in areas that focus on the fundamental principles of:

- radiation,
- drinking water sources,
- radioactive/biohazard signage.

In terms of outreach,

- We would like to provide more informational sessions and sources to rural communities.
- We would like to develop a computer model, such as that being developed at Hanford, which citizens could use to estimate the impact, if any, on their lives from ongoing groundwater studies on the Nevada National Security Site.
- We have an urgent need to provide a cogent explanation to rural citizens about the nature of the trucks and cargo that pass through their communities with radioactive signage.
- We would like to expand our student outreach.

Long term, we think it would be useful for the Department of Energy to develop and promote a national dialog on the subjects of groundwater and transportation of radioactive waste. From the perspective of our Board, we feel that the Department of Energy currently needs a bigger presence in the rural communities, as a source of current, relevant and trusted information that citizens can rely on to make informed decisions concerning themselves and their communities.

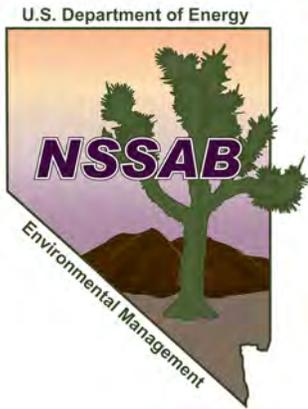
Despite Nevada's numerous outreach opportunities, the Board feels many community members are unaware of the NSSAB and the activities that take place at the Nevada National Security Site (NNSS).

Recommendation:

DOE should have a bigger informational platform in Southern Nevada and a more robust collaboration with local communities.

Specifically, the NSSAB requests support and funding for:

- Community education that focuses on fundamental principles of radiation, drinking water sources, radioactive/biohazard signage, etc.
- Additional informational sessions and sources to rural communities
- Development of a computer model that citizens could estimate the impact, if any, on their lives from ongoing groundwater studies at the NNSS
- Cogent explanation to rural citizens about the nature of trucks/cargo that pass through their communities with radioactive signage
- Expansion of student outreach



Nevada Site Specific Advisory Board

May 18, 2016

Ms. Kelly Snyder
 Deputy Designated Federal Officer
 U.S. Department of Energy, Nevada Field Office
 P. O. Box 98518
 Las Vegas, NV 89193-8518

SUBJECT: Recommendation for FY 2017—FY 2018 Membership

Dear Ms. Snyder:

After preparation and review, the Nevada Site Specific Advisory Board (NSSAB) would like to make the following recommendation regarding the FY 2017-18 membership.

The NSSAB has grouped potential membership appointments into two prioritized categories (candidates have been identified by application number).

	Priority One	Priority Two
	16-28	16-18
	16-23	16-26
	16-05	16-20
	16-13	16-15
	16-32	16-10
	16-21	16-31
	16-16	16-08
	16-19	16-11
	16-04	16-17

It is requested that Priority One candidates be given the highest priority with candidates from Priorities Two selected to ensure maximum Board balance and diversity. Additionally, the Board does not recommend any applicant who is not listed above.

While we realize the final decision regarding membership lies with the Assistant Secretary of Environmental Management, we appreciate the opportunity to participate in the recruitment/interview process. We look forward to welcoming new

Members

- Michael Anderson
- Amina Anderson
- Michael D'Alessio
- Pennie Edmond
- Donna Hruska, Chair**
- Janice Keiserman, Vice Chair**
- Michael Moore
- Donald Neill
- Edward Rosemark
- Steve Rosenbaum
- William Sears
- Thomas Seley
- Cecilia Flores Snyder
- Jack Sypolt
- Francisca Vega

Liaisons

- Clark County
- Consolidated Group of Tribes and Organizations
- Esmeralda County Commission
- Nye County Commission
- Nye County Emergency Management
- Nye County Nuclear Waste Repository Project Office
- State of Nevada Division of Environmental Protection
- U.S. National Park Service

Administration

- Barbara Ulmer, Administrator
Navarro
- Kelly Snyder, DDFO
*U.S. Department of Energy,
 Nevada Field Office*

members to the Board in the coming year, thus ensuring continued stakeholder involvement in the Environmental Management activities at the Nevada National Security Site.

Sincerely,



Donna L. Hruska, Chair

cc: D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
A. C. Finelli, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
R. F. Boehlecke, NFO
C. G. Lockwood, NFO
S. A. Wade, NFO
B. K. Ulmer, Navarro
NSSAB Members and Liaisons



Department of Energy
National Nuclear Security Administration
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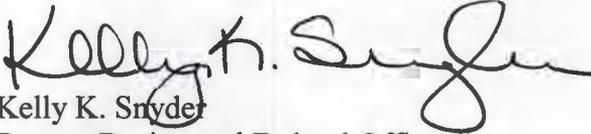
Donna Hruska, Chair
Nevada Site Specific Advisory Board
232 Energy Way
North Las Vegas, NV 89030

**RESPONSE TO THE NEVADA SITE SPECIFIC ADVISORY BOARD (NSSAB) FY 2017 –
FY 2018 MEMBERSHIP RECOMMENDATION**

As part of the NSSAB membership process, the Department of Energy's (DOE), Nevada Field Office (NFO) has reviewed all applications received and interviewed applicants, in conjunction with the NSSAB Membership Committee. When determining the slate of candidates to recommend to DOE Headquarters, the Nevada Field Office gave heavy consideration to the NSSAB's May 18th recommendation which prioritized candidates for membership. We understand that the Board's recommendation was for Priority One candidates be given the highest priority and Priority Two candidates be selected to ensure maximum Board balance and diversity. We appreciate the Board's participation in the process and viewed your recommendation as a vital component when preparing the membership package.

The NFO has submitted to the DOE Headquarters twelve individuals for membership appointment consideration. Currently, Headquarters has initiated its review of the membership package. Final selection of new members by Headquarters will be made during the next several months with appointments effective October 1, 2016.

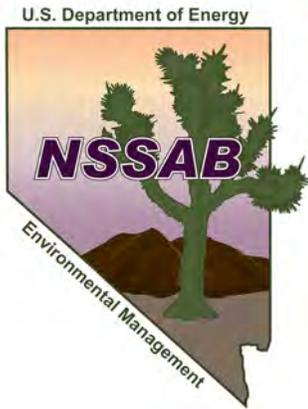
If you have questions, please contact me at (702) 295-2836 or via e-mail at kelly.snyder@nnsa.doe.gov.


Kelly K. Snyder
Deputy Designated Federal Officer

EMOS:11831.KKS

cc via e-mail:

D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
A. C. Finelli, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
NSSAB Members and Liaisons
B. K. Ulmer, Navarro
R. F. Boehlecke, NFO
C. G. Lockwood, NFO
S. A. Wade, NFO
NFO Read File



Nevada Site Specific Advisory Board

May 18, 2016

Mr. Robert F. Boehlecke
 Environmental Management Operations Manager
 U.S. Department of Energy, Nevada Field Office
 P. O. Box 98518
 Las Vegas, NV 89193-8518

SUBJECT: Recommendation for Proposed Changes to Long-Term Monitoring at Closed Sites at the Tonopah Test Range (Work Plan #2)

Dear Mr. Boehlecke:

The Nevada Site Specific Advisory Board (NSSAB) was asked to provide a recommendation, from a community perspective, to the U.S. Department of Energy regarding the proposed changes to current long-term requirements at the Tonopah Test Range.

The NSSAB received a briefing at its May 18th Full Board meeting and considered the pros and cons for multiple options and recommends the following for each of the five sites listed below:

Site	NSSAB Recommendation
Bomblet Pit (CAS TA-55-001-TAB2)	Conduct final vegetation survey, and if botanist agrees, remove fencing, concurrently seek tribal advice and interaction with the land, and consider recycling
Five Points Landfill (CAS TA-19-001-05PT)	Conduct final vegetation survey, and if botanist agrees, remove fencing and discontinue vegetation monitoring, concurrently seek tribal advice and interaction with the land, and consider recycling
Roller Coaster Lagoons (CAS TA-03-001-TARC)	No change, site remains fenced and posted
Roller Coaster RadSafe Area (CAS TA-23-001-TARC)	Evaluate potential for clean closure
Thunderwell Site (CAS RG-26-001-RGRV)	Evaluate potential for clean closure

Members

- Michael Anderson
- Amina Anderson
- Michael D'Alessio
- Pennie Edmond
- Donna Hruska, Chair**
- Janice Keiserman, Vice Chair**
- Michael Moore
- Donald Neill
- Edward Rosemark
- Steve Rosenbaum
- William Sears
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- Nye County Emergency Management
- Nye County Nuclear Waste Repository Project Office
- State of Nevada Division of Environmental Protection
- U.S. National Park Service

Administration

- Barbara Ulmer, Administrator
Navarro
- Kelly Snyder, DDFO
U.S. Department of Energy, Nevada Field Office

Robert Boehlecke
May 18, 2016
Page 2

Thank you for the opportunity to provide a recommendation on this work plan item. The NSSAB appreciates the time Tiffany Lantow, Soils Activity Lead, provided in briefing the subject and answering questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Donna L. Hruska". The signature is fluid and cursive, with the first name "Donna" being the most prominent.

Donna L. Hruska, Chair

cc: D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
A. C. Finelli, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
T. A. Lantow, NFO
C. G. Lockwood, NFO
K. K. Snyder, NFO
S. A. Wade, NFO
B. K. Ulmer, Navarro



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JUN 29 2016

Donna L. Hruska, Chair
Nevada Site Specific Advisory Board
232 Energy Way
North Las Vegas, NV 89030

**RESPONSE TO NEVADA SITE SPECIFIC ADVISORY BOARD (NSSAB)
RECOMMENDATION FOR PROPOSED CHANGES TO LONG-TERM MONITORING AT
CLOSED SITES AT THE TONOPAH TEST RANGE (WORK PLAN #2)**

I would like to thank the NSSAB for taking the time to provide recommendations regarding proposed changes to long-term monitoring at closed sites on the Tonopah Test Range (TTR). Five closed sites on the TTR are being evaluated for changes to the post-closure monitoring and/or controls, and the NSSAB evaluated each site in order to recommend a path forward.

Two closed sites, the Five Points Landfill (Corrective Action Site [CAS] TA-19-001-05PT) and the Bomblet Pit (CAS TA-55-001-TAB2) have fences that the NSSAB recommended removing if a final vegetation survey indicates that removal is appropriate. At two closed sites, the Roller Coaster RadSafe Area (CAS TA-23-001-TARC) and the Thunderwell Site (CAS RG-26-001-RGRV) the NSSAB recommended an evaluation to determine if clean closure has become feasible. At the Roller Coaster Lagoons (CAS TA-03-001-TARC), the NSSAB recommended leaving the closure controls in place.

The post-closure monitoring and controls at these five sites will be evaluated by the DOE with the NSSAB's recommendations in mind; an update will be provided to the NSSAB in Fiscal Year 2017. The Nevada Field Office Environmental Management Operations Activity appreciates the support of the NSSAB in this endeavor and the efforts made by the Board to provide recommendations.

As always, the NSSAB's input is valued and your efforts are greatly appreciated. Please direct comments and questions to Kelly Snyder at (702) 295-2836.

Tiffany A. Lantow, Soils Activity Lead
Environmental Management Operations

EMO:11859.TL

Donna L. Hruska, Chair

-2-

JUN 29 2016

cc via e-mail:

D. A. Borak, DOE/HQ (EM-3.2)

E. B. Davison, DOE/HQ (EM-3.2)

M. R. Hudson, DOE/HQ (EM-3.2)

NSSAB Members and Liaisons

B. K. Ulmer, Navarro

R. F. Boehlecke, NFO

K. K. Snyder, NFO

S. A. Wade, NFO

NFO Read File



Nevada Site Specific Advisory Board

May 18, 2016

Members

Michael Anderson
Amina Anderson
Michael D'Alessio
Pennie Edmond
Donna Hruska, Chair
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*U.S. Department of Energy,
Nevada Field Office*

Mr. Robert F. Boehlecke
Environmental Management Operations Manager
U.S. Department of Energy, Nevada Field Office
P. O. Box 98518
Las Vegas, NV 89193-8518

SUBJECT: Recommendation for Revegetation at Corrective Action
Unit (CAU) 111 (Work Plan #3)

Dear Mr. Boehlecke:

The Nevada Site Specific Advisory Board (NSSAB) was asked to provide a recommendation, from a community perspective, to the U.S. Department of Energy (DOE) on suggesting a path forward regarding the vegetative cover at CAU 111.

The NSSAB received a briefing at its May 18th Full Board meeting and recommends that the DOE should explore all available opportunities, including, but not limited to the following:

- Remove the topsoil when constructing future waste cells and stockpile for use for the closure of the cell
- Utilize bovine manure as a fertilizer
- Consider if halogeton is contributing to the salinity
- Collect seeds in the local vicinity for replanting as it may be more viable than store-bought seeds
- Recognize that each site is unique and should be considered separately
- Prepare the soil in advance for revegetation, i.e. fertilizer, tribal cultural interaction, etc.
- Consider transplants
- Experiment with smaller test plots (5-10) with varying parameters, i.e. transplants, fertilizer, mulching, seeding, amount of watering, etc.
- Perform microscopic tests on the soil composition at different depths to understand what may be missing in the soil
- Consider doing nothing
- Consult with the State of Nevada Bureau of Mining Regulation and Reclamation
- Utilize topsoil from another area with similar soil composition and deposit on top of the 92-Acre Area
- Consult a horticulture expert

Robert Boehlecke

May 18, 2016

Page 2

Additionally, the Board understands that a committee from the Consolidated Group of Tribes and Organizations is currently reviewing this issue and will also be providing recommendations to DOE this fiscal year, and DOE should consider any recommendations offered by the tribes. The Board values the opportunity to provide meaningful input to DOE regarding the vegetative cover at CAU 111 and appreciates the time that Tiffany Lantow, Soils Activity Lead, provided in briefing the subject and answering questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Donna L. Hruska". The signature is written in a cursive style.

Donna L. Hruska, Chair

cc: D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
A. C. Finelli, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
T. A. Lantow, NFO
C. G. Lockwood, NFO
K. K. Snyder, NFO
S. A. Wade, NFO
B. K. Ulmer, Navarro



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National Nuclear Security Administration
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JUN 29 2016

Donna L. Hruska, Chair
Nevada Site Specific Advisory Board
232 Energy Way
North Las Vegas, NV 89030

**RESPONSE TO NEVADA SITE SPECIFIC ADVISORY BOARD (NSSAB)
RECOMMENDATION FOR REVEGETATION AT CORRECTIVE ACTION UNIT 111
(WORK PLAN #3)**

I would like to thank the NSSAB for taking the time to provide recommendations regarding revegetation at closed Corrective Action Unit (CAU) 111 in Area 5 of the Nevada National Security Site.

The NSSAB made several recommendations for the DOE to consider when evaluating a path forward for the revegetation efforts at CAU 111, including considering any recommendations made by the Consolidated Group of Tribes and Organizations (CGTO) subgroup currently evaluating the same subject. The recommendations made by both the NSSAB and the CGTO subgroup will be considered by the DOE; an update to the NSSAB will be provided in Fiscal Year 2017. The Nevada Field Office Environmental Management Operations Activity appreciates the support of the NSSAB in this endeavor and the efforts made by the Board to provide recommendations.

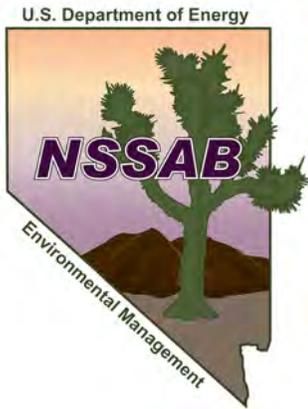
As always, the NSSAB's input is valued and your efforts are greatly appreciated. Please direct comments and questions to Kelly Snyder at (702) 295-2836.

Tiffany A. Lantow, Soils Activity Lead
Environmental Management Operations

EMO:11858.TL

cc via e-mail:

D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
NSSAB Members and Liaisons
B. K. Ulmer, Navarro
R. F. Boehlecke, NFO
K. K. Snyder, NFO
S. A. Wade, NFO
NFO Read File



Nevada Site Specific Advisory Board

May 18, 2016

Mr. Robert F. Boehlecke
Environmental Management Operations Manager
U.S. Department of Energy, Nevada Field Office
P. O. Box 98518
Las Vegas, NV 89193-8518

SUBJECT: Recommendation for Radioactive Waste Acceptance Program
(RWAP) Assessment Improvement Opportunities (Work Plan #7)

Dear Mr. Boehlecke:

The Nevada Site Specific Advisory Board (NSSAB) was asked to provide a recommendation, from a community perspective, to the U.S. Department of Energy on ways to improve the RWAP assessment process.

In support of this work plan, Jhon Carilli, Low-Level Waste Activity Lead, provided an extensive briefing on the RWAP assessment process at the March 16th NSSAB meeting. Also in March 2016, Cecilia Flores Snyder and Jack Sypolt, NSSAB members, observed a surveillance of a generator for the Nevada National Security Site (NNSS).

Ms. Snyder and Mr. Sypolt reported to the NSSAB that the RWAP process is a streamlined, mature process that seems to be effective in assessing a generator's compliance to the NNSS Waste Acceptance Criteria. The generator assessed also had solid processes in place, making the surveillance a very efficient process and evidence of this included:

- All documents and personnel were readily available.
- The auditors knew what to focus on.
- Experienced and knowledgeable personnel available for both the generator and the RWAP team.

After updates by Ms. Snyder and Mr. Sypolt and Board discussion at the NSSAB's May 18th Full Board meeting, the NSSAB recommends the following for the RWAP assessment process:

- Continue funding and support of the surveillance and auditing process and programs. It is important to have a pipeline of experienced auditors who can continue this process without interruption; it was great to see an auditor-in-training on the surveillance team.
- Include NSSAB members to observe/participate in future surveillances and audits of NNSS generators. The observation of the surveillance by NSSAB members is a great learning experience.

Members

Michael Anderson
Amina Anderson
Michael D'Alessio
Pennie Edmond
Donna Hruska, Chair
Janice Keiserman, Vice Chair
Michael Moore
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Nye County Emergency
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Nye County Nuclear Waste
Repository Project Office
State of Nevada Division of
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U.S. National Park Service

Administration

Barbara Ulmer, Administrator
Navarro
Kelly Snyder, DDFO
*U.S. Department of Energy,
Nevada Field Office*

Robert Boehlecke
May 18, 2016
Page 2

The NSSAB appreciates the opportunity to observe this surveillance and to provide this recommendation and extends a special thanks to the RWAP team members and all who helped the NSSAB participate in the surveillance.

Sincerely,



Donna L. Hruska, Chair

cc: D. A. Borak, DOE/HQ (EM-3.2)
E. B. Davison, DOE/HQ (EM-3.2)
A. C. Finelli, DOE/HQ (EM-3.2)
M. R. Hudson, DOE/HQ (EM-3.2)
J. T. Carilli, NFO
K. J. Cabbie, NFO
C. G. Lockwood, NFO
K. K. Snyder, NFO
S. A. Wade, NFO



Department of Energy
National Nuclear Security Administration
Nevada Field Office
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JUN 29 2016

Donna L. Hruska, Chair
Nevada Site Specific Advisory Board
232 Energy Way
North Las Vegas, NV 89030

RESPONSE TO RECOMMENDATION FOR RADIOACTIVE WASTE ACCEPTANCE PROGRAM (RWAP) ASSESSMENT IMPROVEMENT OPPORTUNITIES (WORK PLAN ITEM #7)

Reference: Ltr Hruska to Boehlecke, dtd 05/18/2016

The Nevada Field Office (NFO), Office of Assistant Manager for Environmental Management (O/AMEM) received and reviewed the referenced letter. The O/AMEM replies are as follows:

Continue funding and support of the surveillance and auditing process and programs. It is important to have a pipeline of experienced auditors who can continue this process without interruption; it was great to see an auditor-in-training on the surveillance team.

The NFO agrees that it is very important to continue to fund and support the RWAP surveillance and audit program. We will continue to have a group of experienced auditors to ensure the program continues without interruption. We have multiple auditors for each of the four modules of our assessment program.

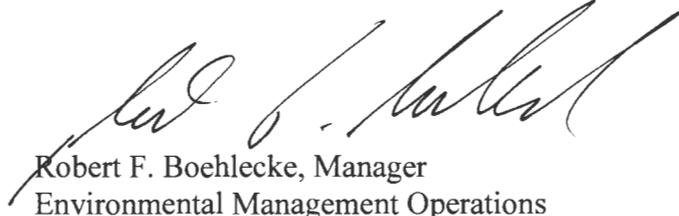
Include NNSAB members to observe/participate in future surveillances and audits of NNSG generators. The observation of the surveillance by NNSAB members is a great learning experience.

The NFO agrees that the observation of RWAP surveillances is a great opportunity for NNSAB members to learn and enhance their knowledge of the RWAP program. It is also an excellent opportunity for NNSAB to share their perspective with DOE and for DOE to be able to learn and improve based on NNSAB input. Therefore, we encourage future participation, and NNSAB should consider including a work plan item in fiscal year 2017 and/or future years.

We are proud of the attention to detail of our auditors and encourage others to observe our process.

The NFO appreciates the support of the NNSAB in this work plan item and the efforts made by the Board to provide recommendations. As always, the NNSAB's input is valued and your efforts are greatly appreciated.

If you have any questions, please feel free to contact Kelly Snyder (702) 295-2836.



Robert F. Boehlecke, Manager
Environmental Management Operations

EMO:11864.KC

cc via e-mail:

D. A. Borak, DOE/HQ (EM-3.2)

E. B. Davison, DOE/HQ (EM-3.2)

M. R. Hudson, DOE/HQ (EM-3.2)

NSSAB Members and Liaisons

B. K. Ulmer, Navarro

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C. G. Lockwood, NFO

K. K. Snyder, NFO

S. A. Wade, NFO

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