

**National Security Technologies<sup>LLC</sup>**  
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# 4<sup>th</sup> QUARTER / ANNUAL TRANSPORTATION REPORT FY2014

**Radioactive Waste Shipments  
to and from the Nevada National Security Site (NNSS)**

**December 2014**



**United States Department of Energy  
National Nuclear Security Administration  
Nevada Field Office  
Las Vegas, Nevada**

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## 1.0 INTRODUCTION

This report satisfies the U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Field Office (NNSA/NFO) commitment to prepare a quarterly summary report of radioactive waste shipments to and from the Nevada National Security Site (NNSS) Radioactive Waste Management Complex (RWMC) at Area 5. There were no shipments sent for offsite treatment and returned to the NNSS this quarter. There was one shipment of two drums sent for offsite treatment and disposal. This report summarizes the 4<sup>th</sup> quarter of Fiscal Year (FY) 2014 low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) shipments. This report also includes annual summaries for FY2014 in Tables 4 and 5.

Tabular summaries are provided which include the following:

- Sources of and carriers for LLW and MLLW shipments to and from the NNSS;
- Number and external volume of LLW and MLLW shipments;
- Highway routes used by carriers; and
- Incident/accident data applicable to LLW and MLLW shipments.

In this report shipments are accounted for upon arrival at the NNSS, while disposal volumes are accounted for upon waste burial. The disposal volumes presented in this report do not include minor volumes of non-radioactive materials that were approved for disposal. Volume reports showing cubic feet (ft<sup>3</sup>) generated using the Low-Level Waste Information System may vary slightly due to differing rounding conventions for volumetric conversions.

## 2.0 SUMMARY OF RADIOACTIVE WASTE SHIPMENTS AND VOLUMES DISPOSED

### Total LLW and MLLW Received from Off-site Generators

A total of 481,712.52 ft<sup>3</sup> of LLW and MLLW was disposed at the NNSS by 19 approved radioactive waste generators in 481 shipments. These shipments were transported using 16 approved motor carriers (including government vehicles).

### Total NNSS On-site LLW/MLLW

One approved NNSS on-site radioactive waste generator disposed 1,371.62 ft<sup>3</sup> of LLW in two on-site transfers. Government vehicles were used for these transfers.

There were eight non-radioactive shipments in the 4<sup>th</sup> quarter of FY2014 for a total volume of 4,501.95 ft<sup>3</sup>.

Table 1 provides a summary of inbound (off-site and on-site) and outbound shipments. Table 2 provides a list of approved waste generators that shipped to/on the NNSS in the 4<sup>th</sup> quarter of FY2014.

**Table 1**  
**NNSS Inbound, On-site, and Outbound Shipments Summary for 4th Quarter of FY2014**

<b>Inbound</b>	<b>Generators</b>	<b>NNSS Generators</b>	<b>Approved Carriers</b>	<b>Shipments</b>	<b>Volume ft<sup>3</sup></b>
LLW / MLLW (off-site)	18	1	16	481	481,713
LLW / MLLW (on-site)	0	1	1	2	1,372
LLW / MLLW (outbound)	0	1	1	1	24

**Table 2**  
**Approved Generators Shipping To/On the NNSS in 4th Quarter of FY2014**

	<b>APPROVED GENERATOR, STATE</b>	<b>GENERATOR CODE</b>
1	ABERDEEN PROVING GROUNDS, MD	AP
2	ADVANCED MIXED WASTE TREATMENT PROJECT, ID	AM
3	ARGONNE NATIONAL LABORATORY, IL	AE
4	BATTELLE ENERGY ALLIANCE, ID	NE
5	BROOKHAVEN NATIONAL LABORATORY, NY	BR
6	CH2M HILL B&W WEST VALLEY, LLC, NY	WV
7	CONSOLIDATED NUCLEAR SECURITY, LLC Y-12, TN	BW
8	DURATEK/ENERGY SOLUTIONS, TN	DR
9	IDAHO NATIONAL LABORATORY, ID	IN
10	LAWRENCE LIVERMORE NATIONAL LABORATORY, CA	LL
11	NATIONAL SECURITY TECHNOLOGIES LLC, NV	LR
12	NAVARRO-INTERA LLC, NV	IT
13	NUCLEAR FUEL SERVICES, TN	NF
14	OAK RIDGE RESERVATION, TN	OR
15	PANTEX, TX	PX
16	PERMA-FIX (M&EC), TN, WA, CA	PF
17	PORTSMOUTH GASEOUS DIFFUSION PLANT, OH	PO
18	UT-BATTELLE / OAK RIDGE NATIONAL LABORATORY, TN	OL
19	WASTREN ADVANTAGE INC., TN	FW

## 2.1 Waste Transporters (Motor Carriers)

Motor carriers operate in compliance with Title 49 Code of Federal Regulations (CFR), "Transportation," and are selected by the waste generator. Generators often use multiple motor carriers during the year to facilitate their shipments. Table 3 provides a list of the approved carriers used to transport LLW and MLLW shipments to the NNSS. Government trucks were used for on-site transfers of LLW and MLLW.

18 shipments bound for the NNSS were transported via intermodal (rail/highway) conveyance, also referred to as transloading, through Parker, AZ.

**Table 3**  
**Approved Motor Carriers Used in 4th Quarter of FY2014**

	<b>APPROVED MOTOR CARRIER</b>	<b>CARRIER CODE</b>
1	AJ METLER	MAJH
2	BOYLE TRANSPORTATION	BYLE
3	BUFFALO FUEL CORPORATION	BUFI
4	CAST SPECIALITY TRANSPORTATION	CSPT
5	CAST TRANSPORTATION	COLO
6	FLUID TRANSPORTS	FLAI
7	GOVERNMENT VEHICLE	GT+
8	HITTMAN TRANSPORT	HITT
9	HUBBARD TRUCKING	HTAL
10	INTERSTATE VENTURES	ITSV
11	LANDSTAR RANGER	LRGR
12	M.P. ENVIRONMENTAL SERVICES	MPES
13	RSB LOGISTICS	RSBI
14	SAVAGE LOGISTICS	SVGS
15	TLI FREIGHT SERVICES	TLVC
16	TRI-STATE MOTOR TRANSIT	TSMT

## 2.2 Shipments

Table 4 provides a summary of all LLW and MLLW off-site shipments received at NNSS and Table 5 provides a summary of NNSS on-site transfers of LLW and MLLW for the 4<sup>th</sup> quarter of FY2014 and also includes a summary for FY2014 in the “Total” column.

**Table 4**  
**Off-Site Shipments of LLW and MLLW Transported to the NNSS**

Off-Site Inbound Shipments	Shipments by Quarter				
Generator, State	1st	2nd	3rd	4th	Total
ABERDEEN PROVING GROUND, MD	0	0	3	<b>3</b>	<b>6</b>
ADVANCED MIXED WASTE TREATMENT PROJECT, ID	15	20	5	<b>34</b>	<b>74</b>
ARGONNE NATIONAL LABORATORY, IL	1	3	2	<b>2</b>	<b>8</b>
CONSOLIDATED NUCLEAR SECURITY, LLC – Y-12 PLANT, TN	21	32	56	<b>27</b>	<b>136</b>
BATTELLE ENERGY ALLIANCE, ID	2	5	2	<b>13</b>	<b>22</b>
BROOKHAVEN NATIONAL LABORATORY, NY	0	1	0	<b>1</b>	<b>2</b>
CH2M HILL B&W WEST VALLEY, NY	0	0	0	<b>3</b>	<b>3</b>
DURATEK/ENERGYSOLUTIONS, TN	1	0	7	<b>1</b>	<b>9</b>
IDAHO NATIONAL LABORATORY, ID	6	3	4	<b>6</b>	<b>19</b>
LAWRENCE LIVERMORE NATIONAL LABORATORY, CA	8	6	5	<b>15</b>	<b>34</b>
LOS ALAMOS NATIONAL LABORATORY, NM	2	0	0	<b>0</b>	<b>2</b>
NATIONAL SECURITY TECHNOLOGIES LLC, NV	0	1	1	<b>1</b>	<b>3</b>
NUCLEAR FUEL SERVICES, TN	18	41	49	<b>30</b>	<b>138</b>
OAK RIDGE RESERVATION, TN	33	86	63	<b>21</b>	<b>203</b>
PADUCAH GASEOUS DIFFUSION PLANT, KY	9	4	0	<b>0</b>	<b>13</b>
PANTEX PLANT, TX	0	0	2	<b>3</b>	<b>5</b>
PERMAFIX (M&EC), TN, WA, CA	21	12	25	<b>23</b>	<b>81</b>
PORTSMOUTH GASEOUS DIFFUSION PLANT, OH	74	99	109	<b>284</b>	<b>566</b>
SANDIA NATIONAL LABORATORIES, NM	4	2	4	<b>0</b>	<b>10</b>
SAVANNAH RIVER SITE, SC	1	0	0	<b>0</b>	<b>1</b>
UT-BATTELLE/OAK RIDGE NATIONAL LABORATORY, TN	1	0	1	<b>2</b>	<b>4</b>
WASTREN ADVANTAGE INC., TN	5	12	1	<b>12</b>	<b>30</b>
<b>Total Shipments</b>	222	327	339	<b>481</b>	<b>1,369</b>



**Table 5  
NNS On-Site Transfers of LLW and MLLW**

<b>On-site Transfers</b>	<b>Shipments by Quarter</b>				
<b>Generator, State</b>	<b>1st</b>	<b>2nd</b>	<b>3rd</b>	<b>4th</b>	<b>Total</b>
National Security Technologies LLC, NV	0	4	3	<b>0</b>	<b>7</b>
Navarro-Intera, LLC, NV	2	0	6	<b>2</b>	<b>10</b>
<b>Total</b>	2	4	9	<b>2</b>	<b>17</b>

### 2.3 Transportation Route Reporting

The NNSA/NFO continues to engage in discussions with radioactive waste generators regarding avoiding the Las Vegas Metropolitan Area. The NNS Waste Acceptance Criteria includes wording requiring generators to notify their carriers to avoid this area.

Due to the events of September 11, 2001, tractor trailers continue to be restricted from travel near the Hoover Dam. The NNS WAC states, "Waste transportation to the NNS, regardless of DOT classification, shall avoid the Hoover Dam Bypass Bridge and Las Vegas".

On August 28, 2014 a load from Aberdeen transited the Las Vegas valley utilizing routes not approved. The shipment travelled north on US-95 to I-515 west to I-215 west, thus transport occurred on prohibited routes while traveling to the NNS.

The waste generator was issued a Corrective Action Request (RWAP-C-15-2) in accordance with the NNSWAC and agreement with the state of Nevada on approved routes and corrective actions were implemented.

The NNSA/NFO also continues to prepare quarterly reports that disclose transporter routes. These reports may be found on the Internet at <http://www.nv.energy.gov/emprograms/transportationreports.aspx>

The following two pages provide details and a graphic depiction of radioactive waste shipment routes traveled to the NNS from July 1, 2014 to September 30, 2014.

**LOW-LEVEL & MIXED LOW-LEVEL RADIOACTIVE WASTE SHIPMENTS TO THE NEVADA NATIONAL SECURITY SITE**

**FOURTH QUARTER REPORT, FY 2014 (JULY, AUGUST, SEPTEMBER 2014)**

RouteType	Route Description	Route Legend	Total Shipments by Route	Origin State>>	CA	ID	ID	ID	IL	MD	NV	NY	NY	OH	TN	TN	TN, WA, CA	TN	TN	TN	TN	TX
				Lawrence Livermore National Laboratory	Batelle Energy Alliance	Idaho National Laboratory	Advanced Mixed Waste Treatment Project	Argonne National Laboratory	Aberdeen Proving Grounds	National Security Technologies, LLC	Brookhaven National Laboratory	CH2M Hill B&W West Valley	Portsmouth Gaseous Diffusion Plant	Consolidated Nuclear Security, LLC - Y-12 Plant	Duratek / Energy Solutions	Materials & Energy Corporation (M&EC) Perma-Fix	Nuclear Fuels Services	Oak Ridge National Laboratory	Wastren Advantage, Inc.	Oak Ridge Reservation	Pantex	
CALIFORNIA	I-15, CA-127, NV-373, US-95 (2D)		6	6																		
CALIFORNIA	I-15, NV-160, US-95		2	2																		
SOUTHERN	I-40, US-93, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95 (5B)		281	3						3				245	17			3			10	
SOUTHERN	I-40, US-95, NV-164, I-15, NV-160, US-95 (1B)		125	1										39	10		20	27	2	12	11	3
NORTHERN	I-80, US-93-ALT, US-6, US-95 (11A)		16		3	3	2	2			1	1	3			1						
NORTHERN	US-50, US-6/50, US-6, US-95 (9A)		1	1																		
NORTHERN	US-93, US-6, US-95(17A)		48		10	3	32										3					
NORTHERN	I-80 US-95 (MINNEMUCCA)(14D)		2	2																		
<b>Total Shipments by Generator&gt;&gt;&gt;</b>			<b>481</b>	<b>15</b>	<b>13</b>	<b>6</b>	<b>34</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>284</b>	<b>27</b>	<b>1</b>	<b>23</b>	<b>30</b>	<b>2</b>	<b>12</b>	<b>21</b>	<b>3</b>	
<b>Total Volume (ft<sup>3</sup>) by Generator&gt;&gt;&gt;</b>			<b>481,712.54</b>	<b>13,726.12</b>	<b>10,933.72</b>	<b>5,132.63</b>	<b>34,859.71</b>	<b>3,546.62</b>	<b>4,148.77</b>	<b>164.21</b>	<b>746.41</b>	<b>2,505.47</b>	<b>297,291.83</b>	<b>43,412.21</b>	<b>47.67</b>	<b>4,177.44</b>	<b>19,755.31</b>	<b>3,886.13</b>	<b>10,311.89</b>	<b>23,862.83</b>	<b>3,203.57</b>	

\*There were 18 transloaded or intermodal shipments this quarter



### 3.0 INCIDENT/ACCIDENT DATA

For the purpose of this report, an incident is defined as a traffic-related accident, a load shift, or a reported leaking/breached package which occurs during transportation of LLW or MLLW. There were two transportation incidents in the 4th quarter of FY2014.

Radioactive waste generators are instructed to notify the NNSA/NFO Assistant Manager of Environmental Management whenever a discrepancy, non-compliance, or inadequate performance is identified; or if a transportation incident or emergency situation occurs.

NSTec, a contractor to the NNSA/NFO, controls NNSW radioactive waste receipt and disposal activities and is responsible for notifying appropriate personnel regarding any non-compliant or refused shipments. NSTec personnel also immediately notify generators of any shipping discrepancies.

The following is a summary of the first incident:

On September 3, 2014, the Portsmouth WCO sent a notification that in the night of September 2, 2014 one of their shipment vehicles was involved as the victim of a minor hit and run incident. While in Tennessee in a construction zone on I-65 North, the truck was hit by a tan vehicle that did not stop. The damage to the truck was a bent fender that did not disable the truck. The driver waited on the scene to file a police report and then delivered his load with no further incident.

The second incident was reported as follows:

“On September 9, 2014 at 0640 hours a truck transporting a PORTS hazardous material shipment was involved in a motor vehicle accident with another vehicle on I-270 in Oklahoma, City, Oklahoma. The accident involved a transport truck and another four wheeled motor vehicle (single occupant/driver). Driver of other vehicle was injured and transported to a local hospital while the transport shipment drivers were uninjured.

The load/shipment is secure with only cosmetic damage to the truck reported. Law Enforcement started their investigation/report and noted that a DOT Inspection would occur prior to releasing the vehicle/shipment to resume transit. The driver was escorted to a nearby truck stop to complete a post-accident drug screening pursuant to Oklahoma Law Enforcement request.”

The above mentioned shipment was successfully delivered and offloaded one day after it was scheduled.

#### **4.0 EVALUATION OF SHIPPING CAMPAIGNS**

This section contains an evaluation summary of the annual shipping campaigns with respect to the significance of the packaging or transportation incidents reported in Section 3.0. Waste generators must ensure that waste is packaged and transported in a safe and compliant manner as detailed in the NNSS Waste Acceptance Criteria (WAC) and U.S. Department of Transportation regulations. Generators and their contracted shipping carriers must be diligent with regard to all requirements including packaging, routing, and shipping documentation.

The NNSS Radioactive Waste Acceptance Program (RWAP) provides oversight of NNSS waste generators for compliance with Department of Transportation regulations and the NNSS Waste Acceptance Criteria including Section 6.0, Waste Transportation and Receipt Information. All generator performance anomalies are tracked and trended for deficient conditions.

Corrective Action Requests are issued by RWAP personnel to identify, track, and resolve deficiencies that violate the NNSSWAC- including failure to follow Department of Transportation requirements. Observations are also issued by RWAP personnel for conditions that represent a weakness in a waste generator's quality assurance or waste certification program that if left uncorrected could result in a condition adverse to quality.

There was one transportation associated CAR issued in this reporting period as described in Section 2.3. For the FY2014 period, this was the only transportation associated CAR issued.

#### **5.0 REFERENCES**

Shipment information is recorded at the NNSS Area 5 Radioactive Waste Management Site by NSTec Waste Management Program personnel. These records provide detailed information on each LLW and MLLW shipment, including the date received, generator, package number and type, volume, weight, carrier, and final disposition. In addition, incident and accident information is collected from NSTec and NNSA/NFO correspondence and personal communications with NNSA/NFO managers, NSTec personnel, waste generators, and carrier personnel. Route information is collected from the NNSA/NFO quarterly routing reports published by NNSA/NFO.

The following source documents are incorporated by reference:

- U.S. Department of Energy, Nevada Operations Office, "Mitigation Action Plan - Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada," DOE/EIS 0243, Las Vegas, Nevada, February 1997.

- U.S. Department of Transportation Regulations, 49 CFR, "Transportation," *Code of Federal Regulations*, Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office, Washington, DC, 2012.

## 6.0 POINTS OF CONTACT

Please contact the following person with questions regarding radioactive waste transportation, waste management, or NNSA/NFO operations.

Nohemi Brewer, Transportation Program Manager  
 U.S. Department of Energy  
 National Nuclear Security Administration  
 Nevada Field Office  
 Environmental Management Operations  
 P.O. Box 98518  
 Las Vegas, NV 89193-8518  
 (702) 295-4800

## 7.0 ACRONYM LIST

<b>ft<sup>3</sup></b>	Cubic Feet
<b>CFR</b>	Code of Federal Regulations
<b>DOE</b>	U.S. Department of Energy
<b>FY</b>	Fiscal Year
<b>LLW</b>	Low-Level Radioactive Waste
<b>MLLW</b>	Mixed Low-Level Radioactive Waste
<b>NNSA/NFO</b>	National Nuclear Security Administration, Nevada Field Office
<b>NSTec</b>	National Security Technologies, LLC
<b>NNSS</b>	Nevada National Security Site
<b>RWMS</b>	Radioactive Waste Management Site

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