



3rd QUARTER TRANSPORTATION REPORT FY 2014

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

September 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 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. This report summarizes the 3rd 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 FY 2014 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 (ft³) generated using the Low-Level Waste Information System may vary slightly due to differing rounding conventions.

2.0 SUMMARY OF RADIOACTIVE WASTE SHIPMENTS AND VOLUMES DISPOSED

Total LLW and MLLW Received from Off-site Generators

A total of 275,989.36 ft³ of LLW and MLLW was disposed at the NNSS by 17 approved radioactive waste generators in 339 shipments. These shipments were transported using 11 approved motor carriers (including government vehicles).

Total NNSS On-site LLW/MLLW

Two approved NNSS on-site radioactive waste generators disposed 2,482.00 ft³ of LLW in nine on-site transfers. Government vehicles were used for these transfers.

There were four non-radioactive shipments in the 3rd quarter of FY2014 for a total volume of 1,725.94 ft³.

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 3rd quarter of FY2014. These totals do not include non-radioactive shipments.

Table 1. NNSS Inbound, On-site, and Outbound Shipments Summary for 3rd Quarter of FY2014

Inbound	Generators	NNSS Generators	Approved Carriers	Shipments	Volume ft³
LLW / MLLW (off-site)	17	1	11	339	275,989
LLW / MLLW (on-site)	0	2	1	9	2,482

Table 2. Approved Generators Shipping To/On the NNSS in 3rd Quarter of FY2014

	APPROVED GENERATOR, STATE	GENERATOR CODE
1	ABERDEEN PROVING GROUNDS, MD	AP
2	ADVANCED MIXED WASTE TREATMENT PROJECT, ID	AM
3	ARGONNE NATIONAL LABORATORY, IL	AE
4	BABCOX & WILCOX TECHNICAL SERVICES Y-12, TN	BW
5	BATTELLE ENERGY ALLIANCE, ID	NE
6	DURATEK/ENERGY SOLUTIONS, TN	DR
7	IDAHO NATIONAL LABORATORY, ID	IN
8	LAWRENCE LIVERMORE NATIONAL LABORATORY, CA	LL
9	NATIONAL SECURITY TECHNOLOGIES LLC, NV	LR
10	NAVARRO-INTERA LLC, NV	IT
11	NUCLEAR FUEL SERVICES, TN	NF
12	OAK RIDGE RESERVATION, TN	OR
13	PANTEX, TX	PX
14	PERMA-FIX (M&EC), TN, WA, CA	PF
15	PORTSMOUTH GASEOUS DIFFUSION PLANT, OH	PO
16	SANDIA NATIONAL LABORATORIES, NM	SA
17	UT-BATTELLE / OAK RIDGE NATIONAL LABORATORY, TN	OL
18	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 NNS. Government trucks were used for on-site transfers of LLW and MLLW.

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

Table 3. Approved Motor Carriers Used in 3rd Quarter of FY2014

	APPROVED MOTOR CARRIER	CARRIER CODE
1	AJ METLER	MAJH
2	BOYLE TRANSPORTATION	BYLE
3	CAST TRANSPORTATION	COLO
4	FLUID TRANSPORTS	FLAI
5	GOVERNMENT VEHICLE	GT+
6	HITTMAN TRANSPORT	HITT
7	HUBBARD TRUCKING	HTAL
8	INTERSTATE VENTURES	ITSV
9	SLT EXTRESS WAY	SLTW
10	TRANSPORTATION, OPERATIONS & PROFESSIONAL SERVICES, INC.	TOPS
11	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 3rd 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				
	1st	2nd	3rd	4th	Total
ABERDEEN PROVING GROUND, MD	0	0	3		3
ADVANCED MIXED WASTE TREATMENT PROJECT, ID	15	20	5		40
ARGONNE NATIONAL LABORATORY, IL	1	3	2		6
BABCOCK & WILCOX TECHNICAL SERVICES Y-12, TN	21	32	56		109
BATTELLE ENERGY ALLIANCE, ID	2	5	2		9
BROOKHAVEN NATIONAL LABORATORY, NY	0	1	0		1
CH2M HILL B&W WEST VALLEY, NY	0	0	0		0
DURATEK/ENERGYSOLUTIONS, TN	1	0	7		8
GENERAL ATOMICS, CA	0	0	0		0
IDAHO NATIONAL LABORATORY, ID	6	3	4		13
LAWRENCE LIVERMORE NATIONAL LABORATORY, CA	8	6	5		19
LOS ALAMOS NATIONAL LABORATORY, NM	2	0	0		2
NATIONAL SECURITY TECHNOLOGIES LLC, NV	0	1	1		2
NUCLEAR FUEL SERVICES, TN	18	41	49		108
OAK RIDGE RESERVATION, TN	33	86	63		182
PADUCAH GASEOUS DIFFUSION PLANT, KY	9	4	0		13
PANTEX PLANT, TX	0	0	2		2
PERMAFIX (M&EC), TN, WA, CA	21	12	25		58
PORTSMOUTH GASEOUS DIFFUSION PLANT, OH	74	99	109		282
SANDIA NATIONAL LABORATORIES, NM	4	2	4		10
SAVANNAH RIVER SITE, SC	1	0	0		1
UT-BATTELLE/OAK RIDGE NATIONAL LABORATORY, TN	1	0	1		2
WASTREN ADVANTAGE INC., TN	5	12	1		18
Total Shipments	222	327	339		888

Table 5. NNSS On-Site Transfers of LLW and MLLW

On-site Transfers	Shipments by Quarter				
Generator, State	1st	2nd	3rd	4th	Total
National Security Technologies LLC, NV	0	4	3		7
Navarro-Intera, LLC, NV	2	0	6		8
Total	2	4	9		15

2.3 Transportation Route Reporting

As a result of obligations made by former DOE Secretary Richardson, NNSS inbound radioactive waste shipments through the Las Vegas I-15 and US-95 Interchange (Spaghetti Bowl) have essentially ceased since FY2000.

The NNSA/NFO continues to engage in discussions with radioactive waste generators regarding avoiding the Las Vegas Metropolitan Area. The NNSS 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. Radioactive waste transportation to the NNSS, regardless of U.S. Department of Transportation classification, shall avoid the O'Callaghan-Tillman Memorial Bridge (i.e., Hoover Dam Bypass Bridge).

Through the 3rd quarter of FY2014, there have been no shipments transported through the Spaghetti Bowl or the O'Callaghan-Tillman Memorial Bridge.

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 NNSS from April 1, 2014 to June 30, 2014.

LOW-LEVEL & MIXED LOW-LEVEL RADIOACTIVE WASTE SHIPMENTS TO THE NEVADA NATIONAL SECURITY SITE																				
THIRD QUARTER REPORT, FY 2014 (APRIL, MAY, JUNE 2014)																				
RouteType	Route Description	Route Legend	Origin State>>	CA	ID	ID	ID	IL	MD	NM	NV	OH	TN	TN	TN, WA, CA	TN	TN	TN	TN	TX
			Total Shipments by Route	Lawrence Livermore National Laboratory	Batelle Energy Alliance	Idaho National Laboratory	Advanced Mixed Waste Treatment Project	Argonne National Laboratory	Aberdeen Proving Grounds	Sandia National Laboratory	National Security Technologies, LLC	Portsmouth Gaseous Diffusion Plant	Babcox & Wilcox Technical Services 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		5	5																
SOUTHERN	I-40, US-93, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95		157									96	30	3					28	
SOUTHERN	I-40, US-95, NV-164, I-15, NV-160, US-95		162						2	4	1	13	26	4	24	49	1	1	35	2
NORTHERN	I-80, US-93-ALT, US-6, US-95		8		2	2		2	1						1					
NORTHERN	US-93, US-6, US-95		7			2	5													
Total Shipments by Generator>>>			339	5	2	4	5	2	3	4	1	109	56	7	25	49	1	1	63	2
Total Volume (ft³) by Generator>>>			275,989	5,396	570	2,619	2,099	1,900	1,570	2,796	19	102,835	74,085	3,765	6,674	25,091	1,617	891	41,345	2,720
*There were 40 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 no transportation incidents in the 3rd 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.

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 NNSW 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 NNSW Radioactive Waste Acceptance Program (RWAP) provides oversight of NNSW waste generators for compliance with Department of Transportation regulations and the NNSW 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 NNSWAC and/or 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.

All waste generators performed adequately in this reporting period. There were no transportation incidents in the 3rd quarter of FY2014.

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 personnel with questions regarding radioactive waste transportation, waste management, or NNSA/NFO operations.

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7.0 ACRONYM LIST

ft³	Cubic Feet
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
FY	Fiscal Year
LLW	Low-Level Radioactive Waste
MLLW	Mixed Low-Level Radioactive Waste
NNSA/NFO	National Nuclear Security Administration, Nevada Field Office
NSTec	National Security Technologies, LLC
NNSS	Nevada National Security Site
RWMS	Radioactive Waste Management Site

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