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THIRD QUARTER TRANSPORTATION REPORT FISCAL YEAR 2019

Waste Shipments to and from the Nevada National Security Site, Radioactive Waste Management Complex

This report was prepared for:
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Office of Environmental Management
Nevada Program

By:
Mission Support and Test Services, LLC
Las Vegas, Nevada

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DISCLAIMER

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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
CNR	Classified Non-Radioactive
CNRH	Classified Non-Radioactive Hazardous
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EM	Environmental Management
ft^3	cubic foot (feet)
FY	fiscal year
LLW	Low-Level Radioactive Waste
MCEP	Motor Carrier Evaluation Program
MLLW	Mixed Low-Level Radioactive Waste
MSTS	Mission Support and Test Services, LLC
NNSA/NFO	U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office
NNSS	Nevada National Security Site
NNSSWAC	Nevada National Security Site Waste Acceptance Criteria
RWAP	Radioactive Waste Acceptance Program
RWMC	Radioactive Waste Management Complex

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1.0 INTRODUCTION

This report satisfies the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (NNSA/NFO) commitment to prepare a quarterly summary of waste shipments to the Nevada National Security Site (NNSS) Radioactive Waste Management Complex (RWMC) in Area 3 and Area 5. This report summarizes the third quarter of fiscal year (FY) 2019 and serves as a quarterly report for the following types of shipments:

- Low-Level Radioactive Waste (LLW)
- Mixed Low-Level Radioactive Waste (MLLW)
- Classified Non-Radioactive (CNR) Waste
- Classified Non-Radioactive Hazardous (CNRH) Waste

Tabular summaries are provided that include the following:

- Number and external volume of LLW, MLLW, and CNR/CNRH shipments
- Waste generators for LLW, MLLW, and CNR/CNRH shipments to and on the NNSS
- Carriers for LLW, MLLW, and CNR/CNRH shipments to and on the NNSS
- Waste generator shipments by quarter
- Highway routes used by carriers
- Incident and accident data applicable to LLW, MLLW, and CNR/CNRH shipments

In this report, shipments are accounted for upon arrival at the NNSS, while disposal volumes are accounted for upon waste burial. Volume reports using the Low-Level Waste Information System showing cubic feet (ft^3) of waste generated may vary slightly due to rounding conventions for conversions from cubic meters to ft^3.

Commercial motor carriers transporting waste to the NNSS must be identified on the U.S. Department of Energy (DOE) Motor Carrier Evaluation Program (MCEP) Evaluated Carrier List or be evaluated in a manner similar to the MCEP process. DOE contractors who transport waste to the NNSS as private motor carriers have their motor carrier operations evaluated by DOE as part of the Transportation Safety and Operations Compliance Assurance Program. In addition, periodic self-assessments are required per DOE Order 460.2A, *Departmental Materials Transportation and Packaging Management*. Because commercial motor carriers and DOE contractors are commercial entities, their operations are also subject to periodic facility and over-the-road inspection by the U.S. Department of Transportation (DOT).

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2.0 SUMMARY OF WASTE SHIPMENTS AND VOLUMES DISPOSED FOR THE THIRD QUARTER OF FY 2019

Total LLW and MLLW Received from Offsite Generators

A total of 303,385 ft^3 of LLW and MLLW was disposed at the NNSS by 19 approved radioactive waste generators in 383 shipments. These shipments were transported using nine MCEP-approved motor carriers and government vehicles.

Total LLW and MLLW Received from Onsite NNSS Generators

A total of 317 ft^3 of LLW was disposed by one approved NNSS onsite radioactive waste generator in five onsite transfers. Onsite government vehicles were used for these transfers. No MLLW was disposed by onsite generators in the third quarter of FY 2019.

Total CNR/CNRH Waste Received from Offsite Generators

A total of 2,119 ft^3 of CNR/CNRH waste was disposed by four approved waste generators at the NNSS this quarter in five shipments. These shipments were transported using one MCEP-approved motor carrier and a government vehicle.

Table 1 provides a summary of waste shipments. Table 2 provides a list of approved waste generators that shipped to or on the NNSS in the third quarter of FY 2019.

TABLE 1. NNSS INBOUND SHIPMENT SUMMARY FOR THE THIRD QUARTER OF FY 2019

INBOUND	OFFSITE GENERATORS	NNSS GENERATORS	CARRIERS	SHIPMENTS	VOLUME (ft^3)
LLW/MLLW (offsite)	17[a]	2	9	383[b]	303,385
LLW (onsite)	0	1[a]	N/A	5	317
CNR/CNRH	3	1	1[a]	5	2,119

[a] Government vehicles were used for the five Mission Support and Test Services, LLC (MSTS), onsite transfers and one Lawrence Livermore National Laboratory shipment.

[b] The 383 LLW/MLLW shipments included 36 classified shipments (29 LLW and seven MLLW).

TABLE 2. APPROVED GENERATORS SHIPPING WASTE IN THE THIRD QUARTER OF FY 2019

	GENERATOR	GENERATOR CODE
1	DUF6 Conversion Project	DU
2	Energy Solutions	DR
3	General Atomics	BG
4	Idaho National Laboratory – Advanced Mixed Waste Treatment Project	AM
5	Idaho National Laboratory – Battelle Energy Alliance	NE
6	Idaho National Laboratory – Fluor Idaho	IN
7	Lawrence Livermore National Laboratory	LL
8	Los Alamos National Laboratory	LA
9	Mission Support and Test Services, LLC	DP
10	Navarro	IT
11	Nuclear Fuel Services	NF
12	Oak Ridge National Laboratory – UT-Battelle	OL
13	Oak Ridge Reservation (UCOR)	OR
14	Pantex Plant	PX
15	PermaFix	PF
16	Portsmouth Gaseous Diffusion Plant	PO
17	Sandia National Laboratories	SA
18	West Valley	WV
19	Y-12 National Security Complex	BW

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, MLLW, CNR, and CNRH shipments to the NNSS.

TABLE 3. APPROVED MOTOR CARRIERS USED IN THE THIRD QUARTER OF FY 2019

	APPROVED MOTOR CARRIER	CARRIER CODE
1	Bennett Secured Transport, LLC	BSTM
2	Buffalo Fuel Corporation	BUFI
3	CAST Transportation	COLO
4	Hittman Transport	HITT
5	Hubbard Trucking	HTAL
6	Interstate Ventures	ITSV
7	M.P. Environmental Services, Inc.	MPES
8	Specialty Transport, Inc.	MAJH
9	Tri-State Motor Transit	TSMT
	Government Vehicle*	GT+

* Government vehicles transporting waste shipments are fully compliant with DOT.

2.2 SHIPMENTS

Table 4 provides a summary of all offsite shipments of LLW and MLLW received at the NNSS in FY 2019. Table 5 provides a summary of NNSS onsite transfers of LLW and MLLW in FY 2019. Table 6 provides a summary of all CNR and CNRH shipments received at the NNSS in FY 2019. The three tables include a summary for FY 2019 in the "Total" column.

TABLE 4. OFFSITE SHIPMENTS OF LLW AND MLLW TRANSPORTED TO THE NNSS IN FY 2019

OFFSITE INBOUND SHIPMENTS	SHIPMENTS BY QUARTER				
Generator, State(s)	1st	2nd	3rd	4th	Total
DUF6 Conversion Project, TN	0	2	**1**		**3**
Energy Solutions, TN	1	3	**7**		**11**
General Atomics, CA	0	0	**4**		**4**
Idaho National Laboratory – Advanced Mixed Waste Treatment Project, ID	22	21	**26**		**69**
Idaho National Laboratory – Battelle Energy Alliance, ID	6	7	**5**		**18**
Idaho National Laboratory – Fluor Idaho, ID	5	4	**9**		**18**
Lawrence Livermore National Laboratory, CA	3	4	**7**		**14**
Los Alamos National Laboratory, NM	14	11	**15**		**40**
Mission Support and Test Services, NV	0	0	**1**		**1**
Navarro, NV	175	35	**120**		**330**
Nuclear Fuel Services, TN	9	1	**3**		**13**
Oak Ridge National Laboratory – UT-Battelle, TN	3	2	**3**		**8**
Oak Ridge Reservation (UCOR), TN	15	15	**66**		**96**
Pantex Plant, TX	0	0	**1**		**1**
PermaFix, TN, WA, and FL	5	7	**4**		**16**
Portsmouth Gaseous Diffusion Plant, OH	34	22	**42**		**98**
Sandia National Laboratory, NM	3	0	**3**		**6**
TRU Waste Processing Center, TN	7	2	**0**		**9**
West Valley, NY	20	31	**30**		**81**
Y-12 National Security Complex, TN	26	44	**36**		**106**
Total Shipments	348	211	**383**		**942**

TABLE 5. NNSS ONSITE TRANSFERS OF LLW AND MLLW IN FY 2019

ONSITE TRANSFERS	SHIPMENTS BY QUARTER				
Generator, State	1st	2nd	3rd	4th	Total
Mission Support and Test Services, NV	3	3	**5**		**11**
Total Shipments	3	3	**5**		**11**

TABLE 6. CNR AND CNRH SHIPMENTS TRANSPORTED TO THE NNSS IN FY 2019

OFFSITE INBOUND SHIPMENTS	SHIPMENTS BY QUARTER				
Generator, State	1st	2nd	3rd	4th	Total
Idaho National Laboratory - Battelle Energy Alliance, ID	1	0	**0**		**1**
Lawrence Livermore National Laboratory, CA	0	0	**1**		**1**
Mission Support and Test Services, NV	0	0	**1**		**1**
Pantex Plant, TX	0	0	**1**		**1**
Sandia National Laboratories, NM	0	0	**2**		**2**
Total Shipments	1	0	**5**		**6**

2.3 TRANSPORTATION ROUTE REPORTING

DOE policy is to avoid shipments traveling through the I-15/US-95 interchange. The Nevada National Security Site Waste Acceptance Criteria (NNSSWAC) includes wording requiring generators to notify their carriers to avoid this area and to select approved routes.

Shipments continue to be restricted from travel near the Hoover Dam. The NNSSWAC states, "Waste transportation to the NNSS, regardless of DOT classification, shall avoid the Hoover Dam Bypass Bridge (Mike O'Callaghan – Pat Tillman Memorial Bridge)."

Recent quarterly and annual transportation reports may be found on the Internet at http://www.nnss.gov/pages/programs/RWM/Reports.html.

Older reports may be obtained by contacting the Office of Scientific and Technical Information at https://www.osti.gov, or by phone at (865) 576-1188.

Table 7 provides details of waste shipment routes traveled to the NNSS for the third quarter of FY 2019. Figure 1 provides a graphic depiction of waste shipment routes traveled to the NNSS for the third quarter of FY 2019.

TABLE 7. SHIPMENT ROUTES FOR THE THIRD QUARTER OF FY 2019

LOW-LEVEL, MIXED LOW-LEVEL & CLASSIFIED NON-RADIOACTIVE WASTE SHIPMENTS TO/ON THE NEVADA NATIONAL SECURITY SITE																						
THIRD QUARTER REPORT, FY 2019 (APRIL, MAY, JUNE 2019)																						
RouteType	Route Description	Route Legend	Origin State>>	CA	CA	ID	ID	ID	NM	NM	NV	NV	NY	OH	TN, WA, FL	TN	TN	TN	TN	TN	TN	TX
			Total Shipments by Route	General Atomics	Lawrence Livermore National Laboratory	Idaho National Laboratory - AMWTP	Idaho National Laboratory - Battelle Energy Alliance	Idaho National Laboratory - Fluor Idaho	Los Alamos National Laboratory	Sandia National Laboratory	Mission Support and Test Services	Navarro	West Valley	Portsmouth Gaseous Diffusion Plant	Perma-Fix	DUF6 Conversion Project	Energy Solutions	Nuclear Fuel Services	Oak Ridge Reservation (UCOR)	Oak Ridge National Laboratory - UT Battelle	Y-12 National Security Complex	Pantex Plant
SOUTHERN	I-40, US-93, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95		163						1	5	2			41	2	1	6	2	66	3	34	
SOUTHERN	I-40, US-95, NV-164, I-15, NV-160, US-95		19						12					1			1	1			2	2
SOUTHERN	I-40, US-95, NV-164, CA-127, NV-373, US-95		3	1	1				1													
SOUTHERN	I-40, I-15, NV-160, US-95		2		1				1													
SOUTHERN	I-40, I-15, CA-127, NV-373, US-95		9	3	6																	
NORTHERN	US-6, US-95 (TTR)		120									120										
NORTHERN	I-80, US-93-ALT, US-6, US-95		30										30									
NORTHERN	US-93, US-6, US-95		42			26	5	9							2							
ON-SITE	On-Site Shipments	N/A	5								5											
Total Shipments by Generator>>>			393	4	8	26	5	9	15	5	7	120	30	42	4	1	7	3	66	3	36	2
Total Volume (ft^3) by Generator>>>			305,821	2,269	12,624	22,153	3,668	4,643	8,642	2,668	439	58,083	30,622	54,018	1,029	2,346	2,920	2,091	44,009	4,978	48,218	399
There were no transloaded shipments this quarter																						

FIGURE 1. ROUTES TRAVELLED TO THE NNSS IN THE THIRD QUARTER OF FY 2019

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3.0 INCIDENT/ACCIDENT DATA

For the purpose of this report, incidents and accidents are defined as follows:

- **Incident:** An unintentional release of hazardous material from a package during transportation, load shift, or any occurrence during transportation in which any of the circumstances identified in 49 CFR 171.15(b) occurs (American National Standards Institute N14.27)
- **Accident:** An occurrence involving a commercial motor vehicle operating on a highway in interstate or intrastate commerce that results in a fatality; bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or one or more motor vehicles incurring disabling damage as a result of the accident, requiring the motor vehicles to be transported away from the scene by a tow truck or other motor vehicle (49 CFR 390.5[1])

The DOE waste generators and carriers are dedicated to ensuring an appropriate response to all offsite transportation events involving DOE radioactive materials. In a memo to Environmental Management (EM) sites on October 17, 2016, the Director of DOE Office of Packaging and Transportation and the NNSA/NFO Assistant Manager for EM established notification criteria to provide additional clarity to the requirements in the NNSSWAC. This reporting is consistent with DOE Manual 460.2-1, and will help to ensure the following:

- Receiving timely notification of all offsite transportation events to assure adequate response resources are assigned
- Notifying appropriate field response personnel and/or resources (including field sites, Radiological Assistance Program teams, and state and tribal contacts) if they have not already been engaged
- Having all potentially involved personnel prepared to respond to inquiries from the media, elected officials, or the public

Waste generators are instructed to notify NNSS personnel whenever a discrepancy, non-compliance, or inadequate performance is identified, or if a transportation incident or emergency situation occurs.

MSTS, a contractor to NNSA/NFO, controls NNSS waste receipt and disposal activities and is responsible for notifying appropriate personnel regarding shipping discrepancies, incidents, or accidents.

There were no transportation incidents or accidents in the third quarter of FY 2019.

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4.0 EVALUATION OF SHIPPING CAMPAIGNS

This section contains a summary of the annual shipping campaigns with respect to the significance of the packaging or transportation incidents or accidents reported in Section 3.0 of this report. Waste generators must ensure that waste is packaged and transported in a safe and compliant manner as detailed in the NNSSWAC and DOT 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 DOT regulations and the NNSSWAC, including Section 6.0 of the NNSSWAC, Waste Transportation and Receipt. All RWAP-identified findings and observations on waste generator performance are tracked and trended.

Findings are issued by RWAP personnel to identify, track, and resolve deficiencies that violate the NNSSWAC, including failure to follow DOT 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. For the purposes of this report, only transportation and packaging findings are reported.

There were no transportation-related findings in the third quarter of FY 2019.

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POINT OF CONTACT

Please contact the following person with questions regarding waste transportation or waste management:

Bill Wilborn, Deputy Program Manager
U.S. Department of Energy
Environmental Management Nevada Program
P.O. Box 98518
Las Vegas, NV 89193-8518
(702) 295-3188

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