

FIRST QUARTER TRANSPORTATION REPORT FISCAL YEAR 2024

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

This report was prepared for:
U.S. Department of Energy,
Office of Environmental Management
Nevada Program

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

January 2024



Work performed under contract number:
DE-NA0003624

DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

Available for sale to the public, in paper, from:

U.S. Department of Commerce
National Technical Information Service
5301 Shawnee Road
Alexandria, VA 22312
Phone: (800) 553-6847
Fax: (703) 605-6880
E-mail: info@ntis.gov; customerservice@ntis.gov
Downloadable (no charge) at: <https://ntrl.ntis.gov/NTRL/>

Available electronically (no charge) at: <http://www.osti.gov>

Available, in paper, for a processing fee to the U.S. Department of Energy and its contractors from:

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062
Phone: (865) 576-8401
Fax: (865) 576-5728
E-mail: reports@osti.gov

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	v
1.0 INTRODUCTION.....	1
2.0 SUMMARY OF WASTE SHIPMENTS AND VOLUMES DISPOSED FOR THE FIRST QUARTER OF FY 2024.....	3
2.1 WASTE TRANSPORTERS (MOTOR CARRIERS)	5
2.2 SHIPMENTS	5
2.3 TRANSPORTATION ROUTE REPORTING	7
3.0 INCIDENT/ACCIDENT DATA.....	11
4.0 EVALUATION OF SHIPPING CAMPAIGNS	13
REFERENCES.....	15
POINT OF CONTACT	17
DISTRIBUTION LIST.....	19

LIST OF FIGURES

FIGURE 1. ROUTES TRAVELED TO THE NNSS IN THE FIRST QUARTER OF FY 2024.....	9
--	---

LIST OF TABLES

TABLE 1. NNSS INBOUND SHIPMENT SUMMARY FOR THE FIRST QUARTER OF FY 2024	4
TABLE 2. APPROVED GENERATORS SHIPPING WASTE IN THE FIRST QUARTER OF FY 2024	4
TABLE 3. APPROVED MOTOR CARRIERS USED IN THE FIRST QUARTER OF FY 2024	5
TABLE 4. OFFSITE SHIPMENTS OF LLW AND MLLW TRANSPORTED TO THE NNSS IN FY 2024	6
TABLE 5. NNSS ONSITE TRANSFERS OF LLW IN FY 2024	6
TABLE 6. CNR AND CNRH SHIPMENTS TRANSPORTED TO THE NNSS IN FY 2024	6
TABLE 7. SHIPMENT ROUTES FOR THE FIRST QUARTER OF FY 2024	8

This page intentionally left blank

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

This page intentionally left blank

1.0 INTRODUCTION

This report satisfies the U.S. Department of Energy (DOE) commitment to prepare a quarterly summary of waste shipments to the Nevada National Security Site (NNSS) Radioactive Waste Management Complex (RWMC) in Area 5. This report summarizes the first quarter of fiscal year (FY) 2024 and serves as 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 waste shipments
- Waste generators for LLW, MLLW, and CNR/CNRH waste shipments to and on the NNSS
- Carriers for LLW, MLLW, and CNR/CNRH waste shipments to and on the NNSS
- Waste generator shipments by quarter
- Shipment routes used by carriers
- Incident and accident data applicable to LLW, MLLW, and CNR/CNRH waste shipments

Volume reports using the Low-Level Waste Information System showing cubic feet (ft³) of waste generated may vary slightly due to rounding conventions for conversions from cubic meters to ft³. Displayed waste volumes summations may vary between tables due to rounding to whole numbers.

Commercial motor carriers transporting waste to the NNSS must be identified on the 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 460.2B, *Departmental Materials Transportation and Packaging Management*. The NNSS Radioactive Waste Acceptance Program (RWAP) routinely reviews motor carrier safety and performance to verify compliance with NNSS Waste Acceptance Criteria (NNSSWAC). 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).

This page intentionally left blank

2.0 SUMMARY OF WASTE SHIPMENTS AND VOLUMES DISPOSED FOR THE FIRST QUARTER OF FY 2024

Total LLW and MLLW Received from Offsite Generators

A total of 172,957 ft³ of LLW and MLLW was disposed at the NNSS by 11 approved radioactive waste generators in 178 shipments. These shipments were transported using 10 MCEP-approved motor carriers.

Total LLW and MLLW Received from Onsite NNSS Generators

A total of 5,208 ft³ of LLW and MLLW was disposed at the NNSS by 2 approved radioactive waste generators in 12 shipments. These shipments were transported using one MCEP-approved motor carrier and government vehicles.

Total CNR/CNRH Waste Received

A total of 815 ft³ of CNR/CNRH waste was disposed at the NNSS by one approved waste generator in two shipments. These shipments were transported using one MCEP-approved motor carriers.

Table 1 provides a summary of waste shipments and Table 2 provides a list of approved waste generators that shipped to or on the NNSS in the first quarter of FY 2024.

TABLE 1. NNSS INBOUND SHIPMENT SUMMARY FOR THE FIRST QUARTER OF FY 2024

INBOUND	OFFSITE GENERATORS	NNSS GENERATORS	CARRIERS	SHIPMENTS	VOLUME (ft ³)
LLW/MLLW (offsite)	11	N/A	10 ^c	178 ^b	172,957
LLW/MLLW (onsite)	N/A	2	2 ^a	12	5,208
CNR/CNRH	1	0	1 ^c	2 ^b	815

^a The two carriers used for the 12 onsite transfers consisted of government vehicles for four Mission Support and Test Services, LLC (MSTS) transfers and one motor carrier for the two MSTS and six Navarro transfers.

^b The 178 LLW/MLLW and two CNR/CNRH shipments include seven classified shipments (two LLW, three MLLW and two CNRH).

^c A total of 10 motor carriers (listed in table 3) were utilized between these shipment categories.

TABLE 2. APPROVED GENERATORS SHIPPING WASTE IN THE FIRST QUARTER OF FY 2024

	GENERATOR	GENERATOR CODE
1	Aberdeen Proving Ground	AP
2	DUF6 Conversion Project	DU
3	EnergySolutions	DR
4	Idaho National Laboratory – Advanced Mixed Waste Treatment Project	AM
5	Los Alamos National Laboratory	LA
6	Mission Support and Test Services, LLC	DP
7	Navarro	IT
8	Oak Ridge National Laboratory – UT-Battelle	OL
9	Oak Ridge Reservation (UCOR)	OR
10	Perma-Fix	PF
11	Portsmouth Gaseous Diffusion Plant	PO
12	Sandia National Laboratories	SA
13	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 may use multiple motor carriers during the year to facilitate their shipments. Table 3 provides a list of the approved carriers used in the first quarter of FY 2024 to transport LLW, MLLW, and CNR/CNRH waste shipments to the NNSS.

TABLE 3. APPROVED MOTOR CARRIERS USED IN THE FIRST QUARTER OF FY 2024

	APPROVED MOTOR CARRIER	CARRIER CODE
1	Bennett Heavy & Specialized, LLC	BHAV
2	CAST Transportation	COLO
3	Hittman Transport Services, Inc.	HITT
4	Interstate Ventures, Inc.	ITSV
5	Landstar Inway, Inc.	LDWY
6	Landstar Ranger, Inc.	LRGR
7	M.P. Environmental Services, Inc.	MPES
8	Specialty Transport, Inc.	MAJH
9	Tri-State Motor Transit Co.	TSMT
10	Turnkey Technical Services, LLC	TNKA
	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 2024. Table 5 provides a summary of NNSS onsite transfers of LLW and MLLW in FY 2024. Table 6 provides a summary of all CNR and CNRH waste shipments received at the NNSS in FY 2024. The three tables include a summary for FY 2024 in the “Total” column.

TABLE 4. OFFSITE SHIPMENTS OF LLW AND MLLW TRANSPORTED TO THE NNSS IN FY 2024

OFFSITE INBOUND SHIPMENTS Generator, State(s)	SHIPMENTS BY QUARTER				
	1 st	2 nd	3 rd	4 th	Total
Aberdeen Proving Ground, MD	1				1
DUF6 Conversion Project,	1				1
Energy Solutions, TN	4				4
Idaho National Laboratory – Advanced Mixed Waste Treatment Project, ID	3				3
Los Alamos National Laboratory, NM	12				12
Oak Ridge National Laboratory – UT-Battelle, TN	3				3
Oak Ridge Reservation (UCOR), TN	80				80
Perma-Fix, TN, WA, and FL	6				6
Portsmouth Gaseous Diffusion Plant, OH	30				30
Sandia National Laboratories, NM	3				3
Y-12 National Security Complex, TN	35				35
Total Shipments	178				178

TABLE 5. NNSS ONSITE TRANSFERS OF LLW/MLLW IN FY 2024

ONSITE TRANSFERS Generator, State	SHIPMENTS BY QUARTER				
	1 st	2 nd	3 rd	4 th	Total
Mission Support and Test Services, NV	6				6
Navarro, NV	6				6
Total Shipments	12				12

TABLE 6. CNR AND CNRH SHIPMENTS TRANSPORTED TO THE NNSS IN FY 2024

OFFSITE INBOUND SHIPMENTS Generator, State	SHIPMENTS BY QUARTER				
	1 st	2 nd	3 rd	4 th	Total
Sandia National Laboratory, NM	2				2
Total Shipments	2				2

2.3 TRANSPORTATION ROUTE REPORTING

DOE policy is to avoid shipments traveling through the I-15/US-95 interchange. The 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 requires that waste transported to the NNSS, regardless of DOT classification, 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 <https://nns.gov/mission/environmental-programs/radioactive-waste-management/>.

Older reports may be obtained by contacting the Office of Scientific and Technical Information at <https://www.osti.gov>, or by phone at (865) 576-8401.

Table 7 provides details of waste shipment routes traveled to the NNSS for the first quarter of FY 2024.

Figure 1 provides a graphic depiction of waste shipment routes traveled to the NNSS for the first quarter of FY 2024.

TABLE 7. SHIPMENT ROUTES FOR THE FIRST QUARTER OF FY 2024

LOW-LEVEL, MIXED LOW-LEVEL & CLASSIFIED NON-RADIOACTIVE WASTE SHIPMENTS TO/ON THE NEVADA NATIONAL SECURITY SITE																
FIRST QUARTER REPORT, FY 2024 (OCTOBER, NOVEMBER, DECEMBER 2023)																
RouteType	Route Description	Route Legend	Origin State>>	ID	MD	NM	NM	NV	NV	OH	TN, WA, FL	TN	TN	TN	TN	TN
			Total Shipments by Route	Idaho National Laboratory - AMWTP	Aberdeen Proving Ground	Los Alamos National Laboratory	Sandia National Laboratories	Mission Support and Test Services	Navarro	Portsmouth Gaseous Diffusion Plant	Perma-Fix	DUF6 Conversion Project	Energy Solutions	Oak Ridge Reservation (UCOR)	Oak Ridge National Laboratory - UT Battelle	Y-12 National Security Complex
SOUTHERN	I-40, US-93, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95		149			2				30	2	1	1	78	2	33
SOUTHERN	I-40, US-95, NV-164, I-15, NV-160, US-95		20		1	10	5							2		2
SOUTHERN	I-40, I-15, NV-160, US-95		5								1		3		1	
NORTHERN	I-80, US-93-ALT, US-6, US-95		1								1					
NORTHERN	US-93, US-6, US-95		5	3							2					
ON-SITE	On-Site Shipments	N/A	12					6	6							
Total Shipments by Generator>>>			192	3	1	12	5	6	6	30	6	1	4	80	3	35
Total Volume (ft ³) by Generator>>>			178,980	2,485	437	6,263	1,630	728	4,480	45,458	7,239	2,346	1,962	55,286	3,364	47,302

FIGURE 1. ROUTES TRAVELED TO THE NNSS IN THE FIRST QUARTER OF FY 2024



This page intentionally left blank

3.0 INCIDENT/ACCIDENT DATA

There were no incidents or accidents in the first quarter of FY 2024.

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 vehicle(s) to be transported away from the scene by a tow truck or other motor vehicle (49 CFR 390.5[1])

Waste generators and carriers are dedicated to ensuring an appropriate response to all offsite transportation events involving DOE radioactive materials. In a memo to all waste generator sites on October 17, 2016, notification criteria was established to provide additional clarity to the requirements in the NNSWAC. This reporting is consistent with DOE guidance, 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 NNS Operations Command Center (OCC) whenever a discrepancy, non-compliance, or inadequate performance or if a transportation incident (including law enforcement directives requiring rerouting) or emergency situation occurs. OCC must be notified no later than one hour after the route deviation/incident with specific details.

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

This page intentionally left blank

4.0 EVALUATION OF SHIPPING CAMPAIGNS

There were no transportation-related findings in the first quarter of FY 2024.

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 NNSWAC and DOT regulations. Generators and their contracted shipping carriers must be diligent regarding all requirements including packaging, routing, and shipping documentation.

The NNSW RWP provides oversight of NNSW waste generators for compliance with DOT regulations and the NNSWAC, including Sections 6 through 12 of the NNSWAC Administrative Waste Acceptance Criteria. All RWP-identified findings and observations on waste generator performance are tracked and trended.

Findings are issued by RWP personnel to identify, track, and resolve deficiencies that violate the NNSWAC, including failure to follow DOT requirements. Observations are also issued by RWP 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.

This page intentionally left blank

REFERENCES

- U.S. Department of Energy, Nevada Operations Office, 2013. “Final Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Offsite Locations in the State of Nevada.” DOE/EIS-0426. Las Vegas, Nevada. February 2013.
- U.S. Department of Energy, Nevada Operations Office, 2014. “Record of Decision (ROD) for the Continued Management, Operations, and Activities of the Nevada National Security Site (NNSS) and Offsite Locations in the State of Nevada.” EIS-0426 Record of Decision. Las Vegas, Nevada. December 2014.
- U.S. Department of Energy, Office of Packaging and Transportation, 2016. Memo establishing notification criteria. Las Vegas, Nevada. October 2016.
- U.S. Department of Energy, Nevada Operations Office, 2022. WAC DOE/NV--25-22-00 Nevada National Security Site Waste Acceptance Criteria
- U.S. Department of Transportation Regulations, 2012. 49 CFR, “Transportation,” Code of Federal Regulations, Office of the Federal Register, National Archives and Records Administration. U.S. Government Printing Office. Washington, D.C. 2012.

This page intentionally left blank

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
100 N. City Parkway, Suite 1750
Las Vegas, NV 89106-4617
(702) 724-0823

This page intentionally left blank

DISTRIBUTION LIST

U.S. Department of Energy
National Nuclear Security Administration
Nevada Field Office
Public Reading Facility
c/o Nuclear Testing Archive
P.O. Box 98521
Las Vegas, NV 89193-8521

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062