

FIRST QUARTER TRANSPORTATION REPORT FISCAL YEAR 2019

**Waste Shipments to and from the Nevada National Security Site
(NNSS), 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 2019



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 or its contractors or subcontractors.

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://classic.ntis.gov/search/>

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	3
2.1 WASTE TRANSPORTERS (MOTOR CARRIERS)	4
2.2 SHIPMENTS.....	5
2.3 TRANSPORTATION ROUTE REPORTING	6
3.0 INCIDENT/ACCIDENT DATA.....	9
4.0 EVALUATION OF SHIPPING CAMPAIGNS	10
REFERENCES.....	11
POINT OF CONTACT	13
DISTRIBUTION LIST.....	16

LIST OF FIGURES

FIGURE 1. GRAPHIC REPRESENTATION OF ROUTES TRAVELLED TO THE NNSS FOR FIRST QUARTER OF FY 2019.....	8
--	---

LIST OF TABLES

Table 1. NNSS Inbound, Onsite, and Classified Non-Radioactive Shipment Summary for First Quarter of FY 2019	3
Table 2. Approved Generators Shipping to or on the NNSS in First Quarter of FY 2019	4
Table 3. Approved Motor Carriers Used in First Quarter of FY 2019.....	4
Table 4. Offsite Shipments of LLW and MLLW Transported to the NNSS in First Quarter of FY 2019	5
Table 5. NNSS Onsite Shipments of LLW and MLLW in First Quarter of FY 2019	6
Table 6. CNR and CNRH Shipments Transported to the NNSS in First Quarter of FY 2019	6
Table 7. Shipment Routes for First Quarter of FY 2019.....	7

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, 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 first 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 showing cubic feet (ft³) generated using the Low-Level Waste Information System may vary slightly due to rounding conventions for conversions from cubic meters to cubic feet.

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 & Operations Compliance Assurance Program (TCAP). In addition, periodic self-assessments are also required per DOE Order 460.2A Departmental Materials Transportation and Packaging Management. Because both commercial motor carriers and DOE contractors are commercial entities, their operations are also subject to periodic facility and over the road inspection by DOT.

This page intentionally left blank

2.0 SUMMARY OF WASTE SHIPMENTS AND VOLUMES DISPOSED for 1st Quarter of FY2019

Total LLW and MLLW Received from Offsite Generators

A total of 258,559 ft³ of LLW and MLLW was disposed at the NNSS by 16 approved radioactive waste generators in 348 shipments. These shipments were transported using ten MCEP-approved motor carriers.

Total NNSS Onsite LLW and MLLW

A total of 296 ft³ of LLW and MLLW was disposed by one approved NNSS onsite radioactive waste generator in three onsite transfers. Onsite government vehicles were used for these transfers.

Total CNR/CNRH Received from Offsite Generators

A total of 991 ft³ of CNR/CNRH waste was disposed at the NNSS by one approved waste generator in one shipment. This shipment was transported using a MCEP-approved motor carrier.

Table 1 provides a summary of radioactive and non-radioactive classified shipments. Table 2 provides a list of approved waste generators that shipped to or on the NNSS in the first quarter of FY 2019.

**TABLE 1. NNSS INBOUND, ONSITE, AND CLASSIFIED NON-RADIOACTIVE SHIPMENT SUMMARY
FOR FIRST QUARTER OF FY 2019**

INBOUND	OFFSITE GENERATORS	NNSS GENERATORS	CARRIERS	SHIPMENTS	VOLUME (FT ³)
LLW / MLLW (offsite)	15	1	10	348 ^b	258,559
LLW (onsite) ^a	0	1	N/A	3	296
CNR / CNRH	1	0	1	1 ^b	991

^a Government vehicles were used for the three MSTs onsite transfers.

^b The 348 LLW/MLLW and one CNR/CNRH shipments include ten classified shipments (seven LLW, two MLLW and one CNR).

TABLE 2. APPROVED GENERATORS SHIPPING TO OR ON THE NNSS IN FIRST QUARTER OF FY 2019

	GENERATOR NAME	GENERATOR CODE
1	Energy Solutions	DR
2	Idaho National Laboratory - Advanced Mixed Waste Treatment Project	AM
3	Idaho National Laboratory - Battelle Energy Alliance	NE
4	Idaho National Laboratory - Fluor Idaho	IN
5	Lawrence Livermore National Laboratory	LL
6	Los Alamos National Laboratory	LA
7	Mission Support and Test Services, LLC	DP
8	Navarro	IT
9	Nuclear Fuel Services	NF
10	Oak Ridge National Laboratory – UT-Battelle	OL
11	Oak Ridge Reservation (UCOR)	OR
12	PermaFix	PF
13	Portsmouth Gaseous Diffusion Plant	PO
14	Sandia National Laboratory	SA
15	TRU Waste Processing Center	FW
16	West Valley	WV
17	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 FIRST QUARTER OF FY 2019

	APPROVED MOTOR CARRIER	CARRIER CODE
1	BARNHART CRANE and RIGGING Co.	BRHT
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
10	WILCOX SECURED, INC.	WCXL
	GOVERNMENT VEHICLE*	GT+

* Government vehicles transporting waste shipments are fully U.S. Department of Transportation (DOT) compliant

2.2 SHIPMENTS

Table 4 provides a summary of all LLW and MLLW offsite shipments received at the NNSS. Table 5 provides a summary of NNSS onsite transfers of LLW and MLLW. Table 6 provides a summary of all CNR shipments received at the NNSS. 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 FIRST QUARTER OF FY 2019

OFFSITE INBOUND SHIPMENTS Generator, State	SHIPMENTS BY QUARTER				
	1 st	2 nd	3 rd	4 th	Total
Energy Solutions, TN	1				1
Idaho National Laboratory - Advanced Mixed Waste Treatment Project, ID	22				22
Idaho National Laboratory - Battelle Energy Alliance, ID	6				6
Idaho National Laboratory - Fluor Idaho, ID	5				5
Lawrence Livermore National Laboratory, CA	3				3
Los Alamos National Laboratory, NM	14				14
Navarro, NV	175				175
Nuclear Fuel Services, TN	9				9
Oak Ridge National Laboratory – UT-Battelle, TN	3				3
Oak Ridge Reservation (UCOR), TN	15				15
PermaFix, TN,WA,FL	5				5
Portsmouth Gaseous Diffusion Plant, OH	34				34
Sandia National Laboratory, NM	3				3
TRU Waste Processing Center, TN	7				7
West Valley, NY	20				20
Y-12 National Security Complex, TN	26				26
Total Shipments	348				348

TABLE 5. NNSS ONSITE SHIPMENTS OF LLW AND MLLW IN FIRST QUARTER OF FY 2019

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

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

OFFSITE INBOUND SHIPMENTS	SHIPMENTS BY QUARTER				
Generator, State	1 st	2 nd	3 rd	4 th	Total
Idaho National Laboratory - Battelle Energy Alliance, ID	1				1
Total Shipments	1				1

2.3 TRANSPORTATION ROUTE REPORTING

DOE policy is to avoid shipments travelling through the I-15/US-95 interchange. The NNSS 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>

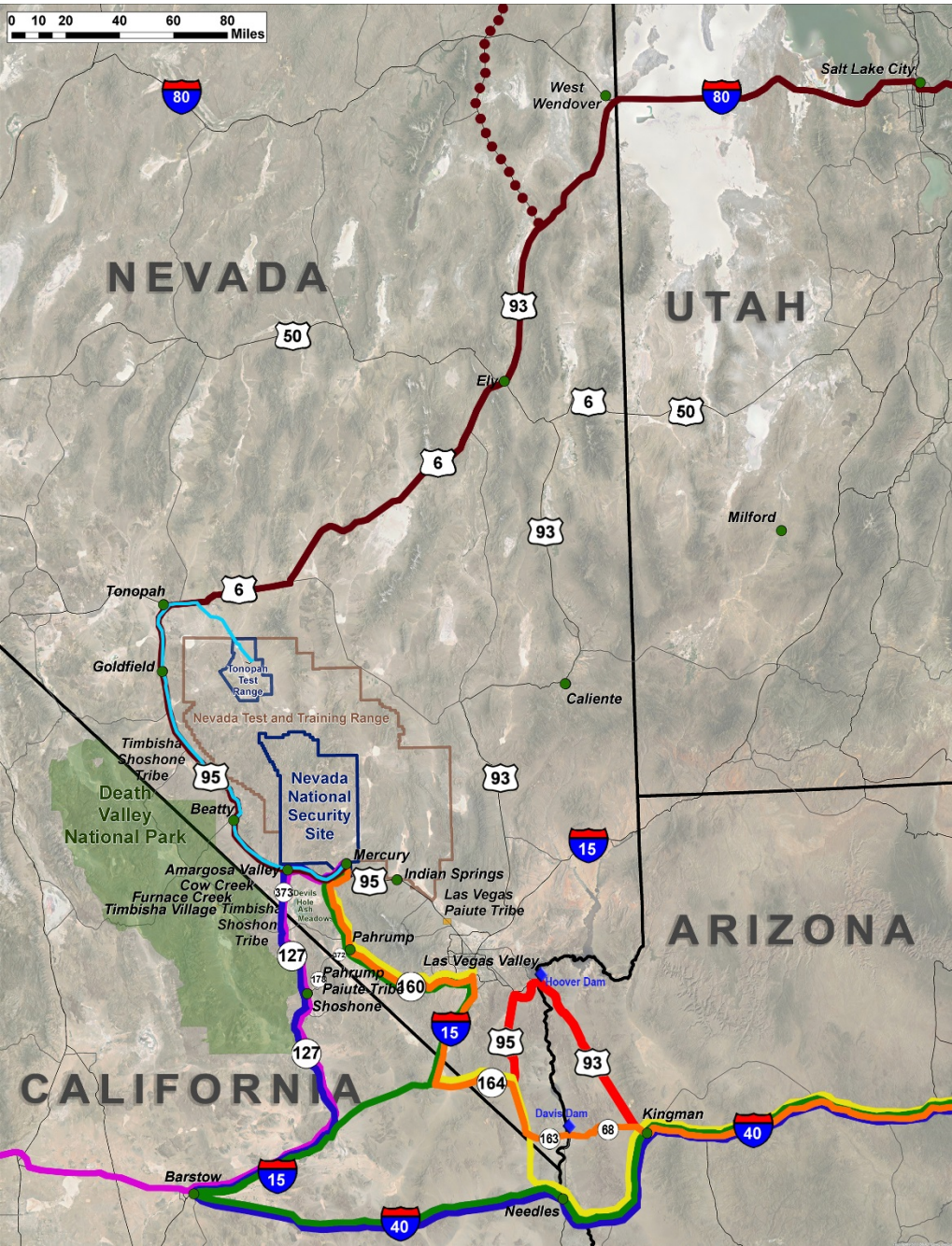
Older reports may be obtained by contacting the Office of Scientific and Technical Information at <https://www.osti.gov>, or by phone at (865) 576-1188.

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

TABLE 7. SHIPMENT ROUTES FOR FIRST QUARTER OF FY 2019

LOW-LEVEL, MIXED LOW-LEVEL & CLASSIFIED NON-RADIOACTIVE WASTE SHIPMENTS TO/ON THE NEVADA NATIONAL SECURITY SITE																			
FIRST QUARTER REPORT, FY 2019 (OCTOBER, NOVEMBER, DECEMBER 2018)																			
RouteType	Route Description	Route Legend	Origin State>>	CA	ID	ID	ID	NM	NM	NV	NV	NY	OH	TN, WA, FL	TN	TN	TN	TN	TN
			Total Shipments by Route	Lawrence Livermore National Laboratory	Idaho National Laboratory - AMWTP	Idaho National Laboratory - Battelle Energy Alliance	Idaho National Laboratory - Fluor Idaho	Sandia National Laboratory	Los Alamos National Laboratory	Mission Support and Test Services	Navarro	West Valley	Portsmouth Gaseous Diffusion Plant	Perma-Fix	Energy Solutions	Nuclear Fuel Services	Oak Ridge Reservation (UCOR)	Oak Ridge National Laboratory - UT Battelle	TRU Waste Processing Center
CALIFORNIA	I-15, CA-127, NV-373, US-95		4	3											1				
SOUTHERN	I-40, US-93, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95		82					2	2				30			6	14	2	5
SOUTHERN	I-40, US-93, US-95, NV-164, I-15, NV-160, US-95 (Non-Approved)		1															1	
SOUTHERN	I-40, US-95, NV-164, I-15, NV-160, US-95		28					1	12				2	2		3	1		2
SOUTHERN	I-40, I-15, NV-160, US-95		2										2						
SOUTHERN	I-40, I-15, CA-127, NV-373, US-95		3											3					
NORTHERN	US-6, US-95 (TTR)		175								175								
NORTHERN	I-80, US-93-ALT, US-6, US-95		20									20							
NORTHERN	US-93, US-6, US-95		34		22	7	5												
ON-SITE	On-Site Shipments	N/A	3							3									
Total Shipments by Generator>>>			352	3	22	7	5	3	14	3	175	20	34	5	1	9	15	3	7
Total Volume (ft ³) by Generator>>>			259,846	8,071	19,455	2,193	3,224	1,630	7,271	296	84,704	17,883	52,127	3,786	1,807	5,591	8,102	4,456	6,473
*There were no transloaded shipments this quarter																			

FIGURE 1. GRAPHIC REPRESENTATION OF ROUTES TRAVELLED TO THE NNSS FOR FIRST QUARTER OF FY 2019



3.0 INCIDENT/ACCIDENT DATA

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

- **Incident:** Any 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 (ANSI 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 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 M 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.

Mission Support and Test Services, LLC (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 first quarter of FY 2019.

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. 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, Waste Transportation and Receipt Information. 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 related Findings are reported.

There was one transportation-related Finding in the first quarter of FY 2019.

- On November 5, 2018, an Oak Ridge National Laboratory – UT Battelle shipment, OLL19002, travelled north on U.S. 93 across the Hoover Dam Bypass Bridge (Mike O'Callaghan – Pat Tillman Memorial Bridge), which is not an approved route. RWAP issued finding I-2620 for violating section 6.4 of the NNSSWAC.

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 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.
- U.S. Department of Energy, Office of Packaging and Transportation, 2016. Memo establishing notification criteria. Las Vegas, Nevada. October 2016.

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
EM Nevada Program
P.O. Box 98518
Las Vegas, NV 89193-8518
(702) 295-3188

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