Nevada
Environmental Management
Operations Activity

DOE/NV--1482

National Nuclear Security Administration

Closure Report for Corrective Action Unit 548: Areas 9, 10, 18, 19, and 20 Housekeeping Sites, Nevada National Security Site, Nevada

Controlled Copy No.:_____

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August 2012

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office

DISCLAIMER

DOE/NV--1482

CLOSURE REPORT FOR CORRECTIVE ACTION UNIT 548: AREAS 9, 10, 18, 19, AND 20 HOUSEKEEPING SITES, NEVADA NATIONAL SECURITY SITE, NEVADA

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Las Vegas, Nevada

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CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 548:
AREAS 9, 10, 18, 19, AND 20 HOUSEKEEPING SITES,
NEVADA NATIONAL SECURITY SITE, NEVADA

Approved By: /s/: Tiffany A. Lantow Date: 8/6/2012
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ACRONYMS AND ABBREVIATIONS

CA	Contamination Area
CAS	Corrective Action Site
CAU	Corrective Action Unit
CR	Closure Report
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FFACO	*Federal Facility Agreement and Consent Order*
gal	gallon(s)
HW	hazardous waste
LLW	low-level waste
mg/kg	milligram(s) per kilogram
MW	mixed waste
NCRP	National Council on Radiation Protection and Measurements
NNSA/NSO	U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office
NNSA/NV	U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office
NNSS	Nevada National Security Site
pCi/g	picocurie(s) per gram
PPE	personal protective equipment
Pu	plutonium
QA	quality assurance
QAPP	*Industrial Sites Quality Assurance Project Plan*
QC	quality control
RMA	Radioactive Material Area
RWMS	Radioactive Waste Management Site
TPH	total petroleum hydrocarbons
WMA	waste management area
yd^3	cubic yard(s)

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EXECUTIVE SUMMARY

This Closure Report (CR) documents closure activities for Corrective Action Unit (CAU) 548, Areas 9, 10, 18, 19, and 20 Housekeeping Sites, and complies with the *Federal Facility Agreement and Consent Order* (FFACO) that was agreed to by the State of Nevada; the U.S. Department of Energy (DOE), Environmental Management; the U.S. Department of Defense; and DOE, Legacy Management (FFACO, 1996 as amended). CAU 548 consists of the following Corrective Action Sites (CASs), located in Areas 9, 10, 12, 18, 19, and 20 of the Nevada National Security Site:

- CAS 09-99-02, Material Piles (2)
- CAS 09-99-04, Wax, Paraffin
- CAS 09-99-05, Asbestos, Vermiculite
- CAS 09-99-07, Tar Spill
- CAS 10-22-02, Drums
- CAS 10-22-05, Gas Block
- CAS 10-22-07, Gas Block
- CAS 10-22-34, Drum
- CAS 10-22-38, Drum; Cable
- CAS 12-99-04, Epoxy Tar Spill
- CAS 12-99-08, Cement Spill
- CAS 18-14-01, Transformers (3)
- CAS 19-22-01, Drums
- CAS 19-22-11, Gas Block (2)
- CAS 19-44-01, Fuel Spill
- CAS 20-22-07, Drums (2)
- CAS 20-22-09, Drums (3)
- CAS 20-22-14, Drums (2)
- CAS 20-22-16, Drums (2)
- CAS 20-24-09, Battery

Closure activities began in July 2011 and were completed in December 2011 and included removal and disposal of material piles, spills, sanitary debris, a lead acid battery, lead and steel shot, and stained soil. Activities were conducted according to the Sectored Clean-up Work Plan for Housekeeping Category Waste Sites (U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office [NNSA/NSO], 2003).

Closure activities generated sanitary waste, hydrocarbon waste, low-level waste, hazardous waste, and mixed waste. Some wastes exceeded land disposal limits and required offsite treatment prior to disposal. Other wastes met land disposal restrictions and were disposed in appropriate onsite or offsite landfills.

NNSA/NSO requests the following:

- A Notice of Completion from the Nevada Division of Environmental Protection to NNSA/NSO for closure of CAU 548
- The transfer of CAU 548 from Appendix III to Appendix IV, Closed Corrective Action Units, of the FFACO

1.0 INTRODUCTION

This Closure Report (CR) documents closure activities for Corrective Action Unit (CAU) 548, Areas 9, 10, 18, 19, and 20 Housekeeping Sites, according to the *Federal Facility Agreement and Consent Order* (FFACO) that was agreed to by the State of Nevada; the U.S. Department of Energy (DOE), Environmental Management; the U.S. Department of Defense; and DOE, Legacy Management (FFACO, 1996 as amended). CAU 548 consists of the following Corrective Action Sites (CASs), located in Areas 9, 10, 12, 18, 19, and 20 of the Nevada National Security Site (NNSS):

- CAS 09-99-02, Material Piles (2)
- CAS 09-99-04, Wax, Paraffin
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- CAS 10-22-05, Gas Block
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- CAS 12-99-08, Cement Spill
- CAS 18-14-01, Transformers (3)
- CAS 19-22-01, Drums
- CAS 19-22-11, Gas Block (2)
- CAS 19-44-01, Fuel Spill
- CAS 20-22-07, Drums (2)
- CAS 20-22-09, Drums (3)
- CAS 20-22-14, Drums (2)
- CAS 20-22-16, Drums (2)
- CAS 20-24-09, Battery

1.1 PURPOSE

This CR provides justification for closure of CAU 548 without further corrective action based on implementation of corrective actions in accordance with the Sectored Clean-up Work Plan for Housekeeping Category Waste Sites (U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office [NNSA/NSO], 2003). This CR provides a summary of completed closure activities, documentation supporting the completed corrective actions, and confirmation that the closure objectives were met.

1.2 SCOPE

The scope of closure for CAU 548 included removal and disposal of material piles, spills, sanitary debris, a lead acid battery, lead and steel shot, and stained soil. Closure activities are summarized in Table 1.

1.3 CLOSURE REPORT CONTENTS

This CR includes the following sections:

- Section 1.0: Introduction
- Section 2.0: Closure Activities
- Section 3.0: Waste Disposition
- Section 4.0: Closure Verification Results
- Section 5.0: Conclusions and Recommendations
- Section 6.0: References
- Appendix A: Sample Analytical Results
- Appendix B: Waste Disposition Documentation
- Appendix C: Sectored Housekeeping Site Closure Verification Forms
- Library Distribution List

TABLE 1. SUMMARY OF CORRECTIVE ACTION UNIT 548 CLOSURE ACTIVITIES

CAS	CAS NAME OR SITE DESCRIPTION	CLOSURE ACTIVITIES
09-99-02	Material Piles (2)	A material pile was removed and disposed at the Area 9 U10c Sanitary Landfill.
09-99-04	Wax, Paraffin	A material pile was removed, packaged in nine B-25 boxes, treated by an offsite treatment facility, and will be returned to the NNSS for disposal as MW at the Area 5 RWMS. A verification sample was collected and analyzed for the hazardous constituents of TPH, total chromium, and isotopic Pu.
09-99-05	Asbestos, Vermiculite	A material pile was removed, packaged in one B-25 box, and disposed as LLW at the Area 5 RWMS. A verification sample was collected and analyzed for the hazardous constituents of TPH.
09-99-07	Tar Spill	A tar spill was removed and disposed at the Area 9 U10c Sanitary Landfill.
10-22-02	Drums	None
10-22-05	Gas Block	None
10-22-07	Gas Block	None
10-22-34	Drum	None
10-22-38	Drum; Cable	A 55-gal gas block drum, a small can, and wooden debris were removed and disposed at the Area 9 U10c Sanitary Landfill.
12-99-04	Epoxy Tar Spill	None
12-99-08	Cement Spill	Cement and asphalt piles were removed and disposed at the Area 9 U10c Sanitary Landfill.
18-14-01	Transformers (3)	None
19-22-01	Drums	None
19-22-11	Gas Block (2)	None
19-44-01	Fuel Spill	None
20-22-07	Drums (2)	Seven abandoned, empty 55-gal drums were removed and disposed at the Area 9 U10c Sanitary Landfill. One lead acid battery was removed, packaged in a 55-gal drum, treated at an offsite treatment facility, and will be returned to the NNSS for disposal as MW at the Area 5 RWMS. Tires were removed, packaged in one B-25 box, and disposed at the Area 9 U10c Sanitary Landfill.
20-22-09	Drums (3)	None

TABLE 1. SUMMARY OF CORRECTIVE ACTION UNIT 548 CLOSURE ACTIVITIES (CONTINUED)

CAS	CAS NAME OR SITE DESCRIPTION	CLOSURE ACTIVITIES
20-22-14	Drums (2)	None
20-22-16	Drums (2)	None
20-24-09	Battery	None
No CAS Number	Area 9 Burn Pile	A burn pile was removed and disposed as hydrocarbon waste at the Area 9 U10c Sanitary Landfill.
No CAS Number	Area 9 Stained Soil Areas	Stained soil was removed from two areas, packaged in nine B-25 boxes, and disposed as LLW at the Area 5 RWMS. A verification sample was collected and analyzed for chromium.
No CAS Number	Area 10 Lead Shot	Lead and steel shot and associated soil were removed, packaged in five 55-gal drums, and treated and disposed as HW at an offsite facility.

CAS: Corrective Action Site
gal: gallon(s)
HW: hazardous waste
LLW: low-level waste
MW: mixed waste
NNSS: Nevada National Security Site
Pu: plutonium
RWMS: Radioactive Waste Management Site
TPH: total petroleum hydrocarbons

2.0 CLOSURE ACTIVITIES

This section describes the closure activities performed for CAU 548. Copies of the Sectored Housekeeping Site Closure Verification Forms are included in Appendix C. These forms include before and after photographs of the sites, descriptions of waste, and waste disposal information.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

The following sections describe the closure activities completed for each CAS in CAU 548.

2.1.1 Corrective Action Site 09-99-02, Material Piles (2)

At CAS 09-99-02, a material pile was removed and disposed at the Area 9 U10c Sanitary Landfill.

2.1.2 Corrective Action Site 09-99-04, Wax, Paraffin

At CAS 09-99-04, a material pile and soil was removed, packaged in nine B-25 boxes, and treated at an offsite treatment facility. The waste was returned to the NNSS for disposal as mixed waste (MW) at the Area 5 Radioactive Waste Management Site (RWMS). A verification sample was collected from the bottom of the excavation and analyzed for the hazardous constituents of total petroleum hydrocarbons (TPH), total chromium, and isotopic plutonium (Pu). The excavation was backfilled.

2.1.3 Corrective Action Site 09-99-05, Asbestos, Vermiculite

At CAS 09-99-05, a material pile was removed, packaged in one B-25 box, and disposed as low-level waste (LLW) at the Area 5 RWMS. A verification sample was collected from the underlying soil and analyzed for the hazardous constituents of TPH. Although the material exceeded the landfill acceptance criteria for radiological constituents, radionuclides did not exceed action levels; therefore, the verification sample was not analyzed for radionuclides.

2.1.4 Corrective Action Site 09-99-07, Tar Spill

At CAS 09-99-07, a tar spill was removed and disposed at the Area 9 U10c Sanitary Landfill.

2.1.5 Corrective Action Site 10-22-02, Drums

At CAS 10-22-02, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.6 Corrective Action Site 10-22-05, Gas Block

At CAS 10-22-05, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.7 Corrective Action Site 10-22-07, Gas Block

At CAS 10-22-07, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.8 Corrective Action Site 10-22-34, Drum

At CAS 10-22-34, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.9 Corrective Action Site 10-22-38, Drum; Cable

At CAS 10-22-38, a 55-gallon (gal) gas block drum, a small can, and wooden debris were removed and disposed at the Area 9 U10c Sanitary Landfill.

2.1.10 Corrective Action Site 12-99-04, Epoxy Tar Spill

At CAS 12-99-04, the spill originally described at the site was determined to be a deteriorated 200-foot-long drainage channel constructed to control water flow from a concrete pad. Due to the absence of contamination and the inability of heavy equipment to access the area, no further action was required, and no closure activities were performed.

2.1.11 Corrective Action Site 12-99-08, Cement Spill

At CAS 12-99-08, cement and asphalt piles were removed and disposed at the Area 9 U10c Sanitary Landfill.

2.1.12 Corrective Action Site 18-14-01, Transformers (3)

At CAS 18-14-01, three junction boxes containing wires were found. Transformers were not located at this site. No further action was required, and no closure activities were performed.

2.1.13 Corrective Action Site 19-22-01, Drums

At CAS 19-22-01, the drums previously located at the site were not found and are assumed to have been removed. No further action was required, and no closure activities were performed.

2.1.14 Corrective Action Site 19-22-11, Gas Block (2)

At CAS 19-22-11, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.15 Corrective Action Site 19-44-01, Fuel Spill

At CAS 19-44-01, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.16 Corrective Action Site 20-22-07, Drums (2)

At CAS 20-22-07, seven abandoned, empty 55-gal drums were removed from the Contamination Area (CA) and disposed at the Area 9 U10c Sanitary Landfill. Tires were removed from the CA, packaged in one B-25 box, and disposed at the Area 9 U10c Sanitary Landfill. One lead acid battery was removed from the CA, packaged in a 55-gal drum, and treated on site. The waste was disposed as MW at the Area 5 RWMS. Personal protective equipment (PPE) used during entry into the CA was packaged in a 55-gal drum and disposed as LLW at the Area 5 RWMS.

2.1.17 Corrective Action Site 20-22-09, Drums (3)

At CAS 20-22-09, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.18 Corrective Action Site 20-22-14, Drums (2)

At CAS 20-22-14, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.19 Corrective Action Site 20-22-16, Drums (2)

At CAS 20-22-16, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.20 Corrective Action Site 20-24-09, Battery

At CAS 20-24-09, a crater stability study was performed that indicated the crater is unstable; therefore, no closure activities were performed.

2.1.21 Additional Work

Additional closure activities were conducted in several locations near the CAU 548 sites. These activities are described below.

2.1.21.1 Area 9 Burn Pile

A burn pile in Area 9 was removed and disposed as hydrocarbon waste at the Area 9 U10c Sanitary Landfill.

2.1.21.2 Area 9 Stained Soil Areas

Two stained soil areas were identified near the burn pile in Area 9. Chromium and Pu-239 were present at concentrations above action levels in characterization samples collected from the first stained soil area. Pu-239 was present at concentrations above the action level in characterization samples from the second stained soil area. Because the sites are located within the investigation area of CAU 570, a Soils site, the radiological contamination will be addressed under the closure of CAU 570. Therefore, Pu-239 is not considered a contaminant of concern for CAU 548.

Stained soil was removed from the first stained soil area and packaged in three B-25 boxes. A verification sample was collected from the bottom of the excavation and analyzed for chromium. Stained soil was removed from the second stained area as a best management practice and packaged in six B-25 boxes. Verification samples were not collected after excavation of the second stained soil area because no contaminants of concern were present. The waste was below the landfill acceptance criteria for chromium; therefore, it was disposed as LLW at the Area 5 RWMS. The excavations were backfilled.

2.1.21.3 Area 10 Lead Shot

In Area 10, lead and steel shot and associated soil were removed, packaged in five 55-gal drums, and treated and disposed as hazardous waste (HW) at an offsite facility.

2.2 DEVIATIONS FROM THE PLAN AS APPROVED

This section is not applicable to CAU 548.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

Closure activities were conducted from July to December 2011. The start and end dates of field work for each CAS are provided in Table 2. Waste disposal took place after the end dates listed below in some cases.

TABLE 2. CORRECTIVE ACTION UNIT 548 CLOSURE ACTIVITIES SCHEDULE

CORRECTIVE ACTION SITE OR SITE DESCRIPTION	START	END
09-99-02, Material Piles (2)	07/14/2011	07/14/2011
09-99-04, Wax, Paraffin	07/18/2011	10/06/2011
09-99-05, Asbestos, Vermiculite	07/18/2011	07/18/2011
09-99-07, Tar Spill	07/14/2011	07/14/2011
10-22-38, Drum; Cable	07/14/2011	07/14/2011
12-99-08, Cement Spill	07/12/2011	07/12/2011
20-22-07, Drums (2)	07/21/2011	10/11/2011
Area 9 Burn Pile	07/14/2011	07/14/2011
Area 9 Stained Soil Areas	10/06/2011	12/06/2011
Area 10 Lead Shot	07/19/2011	07/19/2011

2.4 SITE PLAN/SURVEY PLAT

This section is not applicable to CAU 548.

3.0 WASTE DISPOSITION

This section describes the waste streams generated during closure activities and their final disposition.

3.1 WASTE MINIMIZATION

Industry standard waste minimization practices were applied throughout the course of closure activities. These practices included the following:

- Radiological surveys to verify acceptance of construction debris at the Area 9 U10c Sanitary Landfill
- Laboratory analysis to correctly characterize and segregate waste streams
- Size reduction of debris

3.2 WASTE MANAGEMENT

All waste was characterized and managed according to federal and state regulations, DOE orders, and NSTec procedures. Waste management areas (WMAs) were established throughout the project, as needed. All WMAs were identified with appropriate signs and boundaries to restrict unauthorized access. The WMAs were inspected on a weekly or monthly basis, as required, to ensure that all containers were intact, not leaking, and not exceeding storage duration times as specified by regulations and procedures. Applicable WMAs were posted as Radioactive Material Areas (RMAs) whenever radiological waste was stored in the area. Upon removal of radiologically impacted waste, the RMA was surveyed and de-posted.

Waste containers were purchased either new or reconditioned. All containers were inspected prior to use to verify that they were in good condition (e.g., no leaks, rust, or dents), lined or made of material that would not react with the waste, and met U.S. Department of Transportation requirements. The containers remained closed while stored unless waste was being added or removed. Containers were also handled in such a manner that the integrity of the container was not compromised. Appropriate labels were affixed, and relevant information was marked on the containers with an indelible marker. All information was legible and clearly visible.

3.3 WASTE STREAMS AND DISPOSAL

Waste disposition is summarized in Table 3 and discussed in detail in the following sections. Waste disposition documentation is included in Appendix B.

TABLE 3. CORRECTIVE ACTION UNIT 548 WASTE DISPOSITION SUMMARY

WASTE STREAM	DESCRIPTION OF WASTE	VOLUME	WASTE CONTAINER	DATE OF DISPOSAL	DISPOSITION DOCUMENTATION	DISPOSITION
Sanitary Waste	CAS 09-99-02 Material Pile	10 yd^3	Unpackaged	07/14/2011	Landfill Load Verification Forms	Disposed at the Area 9 U10c Sanitary Landfill
	CAS 09-99-07 Tar Spill	10 yd^3	Unpackaged	07/19/2011		
	CAS 10-22-38 Debris	10 yd^3	Unpackaged	07/14/2011		
	CAS 12-99-08 Cement and Asphalt Piles	10 yd^3	Unpackaged	07/12/2011		
	CAS 20-22-07 Empty Drums	1 yd^3	Unpackaged	07/26/2011 10/11/2011		
	CAS 20-22-07 Tires	4 yd^3	One B-25 box	10/11/2011		
Hydrocarbon Waste	Area 9 Burn Pile	20 yd^3	Unpackaged	07/14/2011 07/21/2011	Landfill Load Verification Forms	Disposed at the Area 9 U10c Sanitary Landfill
LLW	CAS 09-99-05 Material Pile	4 yd^3	One B-25 box	08/03/2011	Certificates of Disposal	Disposed at the Area 5 RWMS
	CAS 20-22-07 PPE	55 gal	One 55-gal drum	11/30/2011		
	Area 9 Stained Soil Areas	36 yd^3	Nine B-25 boxes	01/04/2012 01/05/2012		
HW	Area 10 Lead Shot	275 gal	Five 55-gal drums	01/17/2012	Uniform HW Manifest	Disposed by U.S. Ecology in Beatty, Nevada
MW	CAS 09-99-04 Material Pile and Soil	36 yd^3	Nine B-25 boxes	06/27/2012	Certificates of Disposal	Disposed at the Area 5 RWMS
	CAS 20-22-07 Lead Acid Battery	55 gal	One 55-gal drum	07/31/2012		

gal: gallon(s)
HW: hazardous waste
LLW: low-level waste
MW: mixed waste
PPE: personal protective equipment
RWMS: Radioactive Waste Management Site
yd^3: cubic yard(s)

3.3.1 Sanitary Waste

Approximately 45 yd^3 of sanitary waste were generated during closure activities and transported to the Area 9 U10c Sanitary Landfill for disposal. Sanitary waste included approximately 10 yd^3 of material from the pile at CAS 09-99-02, approximately 10 yd^3 of material from the tar spill at CAS 09-99-07, approximately 10 yd^3 of debris from CAS 10-22-38, approximately 10 yd^3 of material from the piles at CAS 12-99-08, seven empty drums from CAS 20-22-07, and one B-25 box containing tires from CAS 20-22-07.

3.3.2 Hydrocarbon Waste

Approximately 20 yd^3 of hydrocarbon waste were generated during closure activities and transported to the Area 9 U10c Sanitary Landfill for disposal. Hydrocarbon waste included material from the Area 9 Burn Pile.

3.3.3 Low-Level Waste

Approximately 40 yd^3 of LLW were generated during closure activities and transported to the Area 5 RWMS for disposal. LLW included one B-25 box of material from the pile at CAS 09-99-05, one 55-gal drum of personal protective equipment from CAS 20-22-07, and nine B-25 boxes of material and soil from the Area 9 Stained Soil Areas.

3.3.4 Hazardous Waste

Approximately 275 gal of HW were generated during closure activities. In Area 10, lead and steel shot and associated soil was removed, packaged in five 55-gal drums, and transported to U.S. Ecology in Beatty, Nevada, for treatment and disposal as HW.

3.3.5 Mixed Waste

Approximately 36 yd^3 of MW were generated during closure activities. MW included nine B-25 boxes of material and soil from CAS 09-99-04 and one 55-gal drum containing a lead acid battery from CAS 20-22-07. The nine B-25 boxes of material and soil from CAS 09-99-04 were transported off site for treatment and returned to the NNSS for disposal at the Area 5 RWMS. The 55-gal drum containing a lead acid battery from CAS 20-22-07 was treated on site and disposed at the Area 5 RWMS.

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4.0 CLOSURE VERIFICATION RESULTS

Site closure was verified by visual observations and by collecting and analyzing soil verification samples. Copies of the Sectored Housekeeping Site Closure Verification Forms are included as Appendix C of this report. These forms include before and after photographs of the sites, descriptions and removal status of waste, and waste disposal information.

Soil verification samples were collected after removal of waste at CAS 09-99-04, CAS 09-99-05, and the Area 9 First Stained Soil Area. Results verified that remaining soil does not contain contamination above action levels. Sample results for analytes detected above minimum detectable concentrations are summarized in the following tables, and the laboratory summary data reports are included in Appendix A.

TABLE 4. VERIFICATION SAMPLE RESULTS DETECTED ABOVE MINIMUM DETECTABLE CONCENTRATIONS FOR CORRECTIVE ACTION SITE 09-99-04

ANALYTE	ACTION LEVEL	SAMPLE RESULTS FOR 099904-V1
Plutonium-238	13 pCi/g*	0.067 pCi/g
Plutonium-239/240	12.7 pCi/g*	4.1 pCi/g
Chromium	450 mg/kg†	5.99 mg/kg

mg/kg: milligram(s) per kilogram
pCi/g: picocurie(s) per gram
* Based on the construction, commercial, industrial land-use scenario in Table 2.1 of the National Council on Radiation Protection and Measurements (NCRP) Report No. 129, Recommended Screening Limits for Contaminated Surface Soil and Review Factors Relevant to Site-Specific Studies (NCRP, 1999). The values provided in this source document were scaled to a dose of 25 millirems per year.
† Based on U.S. Environmental Protection Agency Region 9 Regional Screening Levels for Industrial Soil

TABLE 5. VERIFICATION SAMPLE RESULTS DETECTED ABOVE MINIMUM DETECTABLE CONCENTRATIONS FOR CORRECTIVE ACTION SITE 09-99-05

ANALYTE	ACTION LEVEL	SAMPLE RESULTS FOR 548-099905
Acetone	23 mg/kg*	0.00698 mg/kg

mg/kg: milligram(s) per kilogram
* Based on U.S. Environmental Protection Agency Region 9 Regional Screening Levels for Industrial Soil

TABLE 6. VERIFICATION SAMPLE RESULTS DETECTED ABOVE MINIMUM DETECTABLE CONCENTRATIONS FOR THE AREA 9 FIRST STAINED SOIL AREA

ANALYTE	ACTION LEVEL	SAMPLE RESULTS FOR 548NSA-V1
Chromium	450 mg/kg*	20 mg/kg

mg/kg: milligram(s) per kilogram
* Based on U.S. Environmental Protection Agency Region 9 Regional Screening Levels for Industrial Soil

4.1 DATA QUALITY ASSESSMENT

Accurate and defensible analytical data were collected to verify that the closure objectives were met. Analytical data results are included as Appendix A. The following sections describe the quality assurance (QA) and quality control (QC) procedures and the data validation process. More detail on the QA/QC procedures can be found in the *Industrial Sites Quality Assurance Project Plan* (QAPP) (U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office [NNSA/NV], 2002).

4.1.1 Quality Assurance and Quality Control Procedures

Verification samples were collected with disposable sampling equipment, placed in appropriately labeled containers secured with custody seals, labeled with unique sample numbers, placed on ice, and transported under strict chain of custody. Standard QA/QC samples were collected (i.e., one blind duplicate per batch). Samples were analyzed by certified contract laboratories. Analytical results were validated at the laboratory using stringent QA/QC procedures, including matrix spike/matrix spike duplicates, spiked surrogate recovery analysis, verification of analytical results, and data quality indicator requirements.

4.1.2 Data Validation

Data validation was performed according to the QAPP (NNSA/NV, 2002), which is based on the U.S. Environmental Protection Agency (EPA) functional guidelines for data quality (EPA, 1994; 1999). Data were reviewed to ensure that samples were appropriately processed and analyzed and that the results are valid. All sample data were validated at the Tier I level.

No anomalies were discovered in the data that would discredit any of the sample results. Data met the required data quality indicators (i.e., precision, accuracy, sensitivity, completeness, comparability, and representativeness). The complete datasets, including validation reports, are maintained in the project files and available upon request.

4.2 USE RESTRICTION

Use restrictions were not implemented for any of the CASs in CAU 548, and the future land use of any land related to CAU 548 is not restricted from any activity.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Closure activities began in July 2011 and were completed in December 2011 and included removal and disposal of material piles, spills, sanitary debris, a lead acid battery, lead and steel shot, and stained soil.

5.2 POST-CLOSURE REQUIREMENTS

No use restrictions were implemented, and there are no post-closure requirements.

5.3 RECOMMENDATIONS

Because closure activities for CAU 548 have been completed as documented in this CR, NNSA/NSO requests the following:

- A Notice of Completion from the Nevada Division of Environmental Protection to NNSA/NSO for closure of CAU 548
- The transfer of CAU 548 from Appendix III to Appendix IV, Closed Corrective Action Units, of the FFACO

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6.0 REFERENCES

EPA, see U.S. Environmental Protection Agency.

Federal Facility Agreement and Consent Order, 1996 (as amended March 2010). Agreed to by the State of Nevada; U.S. Department of Energy, Environmental Management; U.S. Department of Defense; and U.S. Department of Energy, Legacy Management.

FFACO, see *Federal Facility Agreement and Consent Order*.

National Council on Radiation Protection and Measurements, 1999. *Recommended Screening Limits for Contaminated Surface Soil and Review of Factors Relevant to Site-Specific Studies*, Report No. 129. Bethesda, MD.

NNSA/NSO, see U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office.

NNSA/NV, see U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office.

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APPENDIX A

SAMPLE ANALYTICAL RESULTS

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Isotopic Plutonium By Alpha Spectroscopy Sample Results Summary

Client Name: National Security Technologies, LLC
Client Project Name: CAU 548
Client Project Number: V3669
Laboratory Name: ALS Environmental -- FC
PAI Work Order: 1110209

Reported on: Monday, November 07, 2011 10:04:55 AM

Lab Sample ID	Client Sample ID	Sample Type	Nuclide	Result +/- 2 s TPU	MDC	Units	Matrix	Prep Batch	Date Analyzed	Flags
1110209-1	548NSA-V1	Sample	Pu-238	7.41E-01 +/- 4.52E-01	3.77E-01	pCi/g	SOIL	AS111025-1	10/29/2011	M3
1110209-1	548NSA-V1	Sample	Pu-239/240	7.10E+01 +/- 1.26E+01	5.65E-01	pCi/g	SOIL	AS111025-1	10/29/2011	M3
1110209-2	099904-V1	Sample	Pu-238	6.70E-02 +/- 2.01E-02	2.93E-03	pCi/g	SOIL	AS111018-1	10/21/2011	
1110209-2	099904-V1	Sample	Pu-239/240	4.10E+00 +/- 6.63E-01	1.07E-02	pCi/g	SOIL	AS111018-1	10/21/2011	
1110209-3	548ANSA-C1	Sample	Pu-238	4.47E-01 +/- 2.82E-01	3.21E-01	pCi/g	SOIL	AS111025-1	11/2/2011	M3
1110209-3	548ANSA-C1	Sample	Pu-239/240	3.88E+01 +/- 6.50E+00	2.77E-01	pCi/g	SOIL	AS111025-1	11/2/2011	M3

Comments:

Data Package ID: *PU1110209-1*

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

INORGANIC ANALYSIS DATA SHEET
SW846 6010B

099904-V1

Laboratory: Lionville Laboratory
SDG: SDG #V3667
Client: National Security Technologies, LLC
Project: CAU548
Matrix: Soil
Laboratory ID: 1110059-01
File ID: ICP101911C-040
Sampled: 10/12/11 11:50
Prepared: 10/19/11 11:31
Analyzed: 10/20/11 02:33
Solids: 97.37
Preparation: SW 3050B
Initial/Final: 0.53 g / 50 mL
Batch: L110198
Sequence: 1100100
Calibration: UNASSIGNED
Instrument: Thermo iTEVA

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	Q	Method
7440-47-3	Chromium	5.99	1		SW846 6010B

ORGANIC ANALYSIS DATA SHEET
8270C

099904-V1

Laboratory:	Lionville Laboratory			SDG:	SDG #V3667
Client:	National Security Technologies, LLC			Project:	CAU548
Matrix:	Soil	Laboratory ID:	1110059-01	File ID:	D102111.D
Sampled:	10/12/11 11:50	Prepared:	10/18/11 14:50	Analyzed:	10/21/11 18:08
Solids:	97.37	Preparation:	SW 3540C	Initial/Final:	30.08 g / 1 mL
Batch:	L110186	Sequence:	1100135	Calibration:	1110023
Instrument:	HP5972D				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
91-20-3	Naphthalene	1	338	U
91-57-6	2-Methylnaphthalene	1	338	U
86-73-7	Fluorene	1	338	U
85-01-8	Phenanthrene	1	338	U
120-12-7	Anthracene	1	338	U
206-44-0	Fluoranthene	1	338	U
129-00-0	Pyrene	1	338	U
56-55-3	Benz[a]anthracene	1	338	U
218-01-9	Chrysene	1	338	U
205-99-2	Benzo[b] fluoranthene	1	338	U
207-08-9	Benzo[k] fluoranthene	1	338	U
50-32-8	Benzo[a] pyrene	1	205	U
191-24-2	Benzo[g,h,i] perylene	1	338	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	2560.7	1230	48	25 - 121	
Phenol-d5	2560.7	1810	71	24 - 113	
Nitrobenzene-d5	1707.1	1200	70	23 - 120	
2-Fluorobiphenyl	1707.1	1220	72	30 - 115	
2,4,6-Tribromophenol	2560.7	1390	54	19 - 122	
p-Terphenyl-d14	1707.1	1490	87	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	143791	8.343	169616	8.343	
Naphthalene-d8	537862	11.258	626724	11.266	
Acenaphthene-d10	259520	15.591	290357	15.599	
Phenanthrene-d10	403546	19.131	427977	19.14	
Chrysene-d12	358633	23.737	408204	23.745	
Perylene-d12	286634	28.052	305569	28.061	

* Value outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8260B

099904-V1

Laboratory:	Lionville Laboratory		SDG:	SDG #V3667	
Client:	National Security Technologies, LLC		Project:	CAU548	
Matrix:	Soil	Laboratory ID:	1110059-01	File ID:	E101906.D
Sampled:	10/12/11 11:50	Prepared:	10/19/11 10:46	Analyzed:	10/19/11 10:46
Solids:	97.37	Preparation:	SW 5035A/5030A	Initial/Final:	4.97 g / 5 mL
Batch:	L110222	Sequence:		Calibration:	Instrument: 5972E

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
71-43-2	Benzene	1	5.17	U
100-41-4	Ethylbenzene	1	5.17	U
108-88-3	Toluene	1	5.17	U
1330-20-7	Xylenes, total	1	5.17	U
108-67-8	1,3,5-Trimethylbenzene	1	5.17	U
103-65-1	n-Propylbenzene	1	5.17	U
104-51-8	n-Butylbenzene	1	10.3	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	51.660	56.3	109	60 - 130	
Toluene-d8	51.660	55.8	108	72 - 117	
4-Bromofluorobenzene	51.660	56.7	110	72 - 144	

* Value outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

548-099905

Laboratory:	Lionville Laboratory			SDG:	SDG #3629
Client:	National Security Technologies, LLC			Project:	CAU548
Matrix:	Soil	Laboratory ID:	1107121-02	File ID:	D080114.D
Sampled:	07/19/11 11:15	Prepared:	07/27/11 14:41	Analyzed:	08/01/11 16:18
Solids:	99.27	Preparation:	SW 3540C	Initial/Final:	30.52 g / 1 mL
Batch:	L107295	Sequence:	1080059	Calibration:	1108018
				Instrument:	HP5972D

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
108-95-2	Phenol	1	327	U
111-44-4	Bis(2-chloroethyl) ether	1	327	U
95-57-8	2-Chlorophenol	1	327	U
541-73-1	1,3-Dichlorobenzene	1	327	U
106-46-7	1,4-Dichlorobenzene	1	327	U
95-50-1	1,2-Dichlorobenzene	1	327	U
95-48-7	2-Methylphenol	1	327	U
108-60-1	Bis(2-chloroisopropyl) ether	1	327	U
65794-96-9	3- and/or 4-Methylphenol	1	327	U
621-64-7	N-Nitrosodi-n-propylamine	1	327	U
67-72-1	Hexachloroethane	1	327	U
98-95-3	Nitrobenzene	1	327	U
78-59-1	Isophorone	1	327	U
88-75-5	2-Nitrophenol	1	327	U
105-67-9	2,4-Dimethylphenol	1	327	U
111-91-1	Bis(2-chloroethoxy) methane	1	327	U
120-83-2	2,4-Dichlorophenol	1	327	U
120-82-1	1,2,4-Trichlorobenzene	1	327	U
91-20-3	Naphthalene	1	327	U
106-47-8	4-Chloroaniline	1	327	U
87-68-3	Hexachlorobutadiene	1	327	U
59-50-7	4-Chloro-3-methylphenol	1	327	U
91-57-6	2-Methylnaphthalene	1	327	U
77-47-4	Hexachlorocyclopentadiene	1	327	U
88-06-2	2,4,6-Trichlorophenol	1	327	U
95-95-4	2,4,5-Trichlorophenol	1	327	U
91-58-7	2-Chloronaphthalene	1	327	U
88-74-4	2-Nitroaniline	1	327	U
131-11-3	Dimethyl Phthalate	1	1630	U
606-20-2	2,6-Dinitrotoluene	1	327	U
208-96-8	Acenaphthylene	1	327	U
99-09-2	3-Nitroaniline	1	327	U
83-32-9	Acenaphthene	1	1630	U
51-28-5	2,4-Dinitrophenol	1	327	U
100-02-7	4-Nitrophenol	1	1630	U
132-64-9	Dibenzofuran	1	1630	U
121-14-2	2,4-Dinitrotoluene	1	327	U
84-66-2	Diethyl Phthalate	1	327	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	327	U
86-73-7	Fluorene	1	327	U
100-01-6	4-Nitroaniline	1	1630	U
534-52-1	4,6-Dinitro-2-methylphenol	1	1630	U
86-30-6	N-Nitrosodiphenylamine	1	327	U
101-55-3	4-Bromophenyl Phenyl Ether	1	327	U
118-74-1	Hexachlorobenzene	1	327	U
87-86-5	Pentachlorophenol	1	1630	U
85-01-8	Phenanthrene	1	327	U
120-12-7	Anthracene	1	327	U
86-74-8	Carbazole	1	327	U
84-74-2	Di-n-butyl Phthalate	1	327	U
206-44-0	Fluoranthene	1	327	U
129-00-0	Pyrene	1	327	U
85-68-7	Butyl Benzyl Phthalate	1	327	U
91-94-1	3,3'-Dichlorobenzidine	1	327	U
56-55-3	Benzo(a)anthracene	1	327	U
218-01-9	Chrysene	1	327	U
117-81-7	Bis(2-ethylhexyl) Phthalate	1	327	U
117-84-0	Di-n-octyl Phthalate	1	327	U
205-99-2	Benzo(b)fluoranthene	1	327	U
207-08-9	Benzo(k)fluoranthene	1	327	U
50-32-8	Benzo(a)pyrene	1	327	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	327	U
53-70-3	Dibenz(a,h)anthracene	1	327	U
191-24-2	Benzo(g,h,i)perylene	1	327	U

ORGANIC ANALYSIS DATA SHEET
8270C

548-099905

Laboratory: Lionville Laboratory | SDG: SDG #3629
Client: National Security Technologies, LLC | Project: CAU548
Matrix: Soil | Laboratory ID: 1107121-02 | File ID: D080114.D
Sampled: 07/19/11 11:15 | Prepared: 07/27/11 14:41 | Analyzed: 08/01/11 16:18
Solids: 99.27 | Preparation: SW 3540C | Initial/Final: 30.52 g / 1 mL
Batch: L107295 | Sequence: 1080059 | Calibration: 1108018 | Instrument: HP5972D

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
100-01-6	4-Nitroaniline	1	1630	U
534-52-1	4,6-Dinitro-2-methylphenol	1	327	U
86-30-6	N-Nitrosodiphenylamine	1	327	U
101-55-3	4-Bromophenyl Phenyl Ether	1	327	U
118-74-1	Hexachlorobenzene	1	327	U
65-85-0	Benzoic Acid	1	1630	U
87-86-5	Pentachlorophenol	1	1630	U
100-51-6	Benzyl alcohol	1	327	U
85-01-8	Phenanthrene	1	327	U
120-12-7	Anthracene	1	327	U
84-74-2	Di-n-butyl Phthalate	1	327	U
206-44-0	Fluoranthene	1	327	U
129-00-0	Pyrene	1	327	U
85-68-7	Butyl Benzyl Phthalate	1	327	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	327	U
91-94-1	3,3'-Dichlorobenzidine	1	654	U
56-55-3	Benz[a]anthracene	1	327	U
218-01-9	Chrysene	1	327	U
117-84-0	Di-n-octyl Phthalate	1	327	U
205-99-2	Benzo[b] fluoranthene	1	327	U
207-08-9	Benzo[k] fluoranthene	1	327	U
50-32-8	Benzo[a] pyrene	1	327	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	327	U
53-70-3	Dibenz[a,h]anthracene	1	327	U
191-24-2	Benzo[g,h,i] perylene	1	327	U
126-73-8	Tributylphosphate	1	327	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg dry)	Q
NA	TIC:Aldol Condensate 1	3.62	137000	JBA
NA	TIC:Aldol Condensate 2	4.315	189	JA
NA	TIC:Aldol Condensate 3	4.544	211	JBA
NA	TIC:Aldol Condensate 4	4.632	504	JA
NA	TIC:Aldol Condensate 5	6.339	2030	JBA
NA	TIC:Alkane 1	22.906	141	JX NA
NA	TIC:Trichloro-1-propene	4.878	530	JB
NA	TIC:Unknown 1	1.341	548	JB
NA	TIC:Unknown 2	2.019	139	J
NA	TIC:Unknown 3	2.679	259	J

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	2475.4	1710	69	25 - 121	

ORGANIC ANALYSIS DATA SHEET
8270C

548-099905

Laboratory:	Lionville Laboratory			SDG:	SDG #3629
Client:	National Security Technologies, LLC			Project:	CAU548
Matrix:	Soil	Laboratory ID:	1107121-02	File ID:	D080114.D
Sampled:	07/19/11 11:15	Prepared:	07/27/11 14:41	Analyzed:	08/01/11 16:18
Solids:	99.27	Preparation:	SW 3540C	Initial/Final:	30.52 g / 1 mL
Batch:	L107295	Sequence:	1080059	Calibration:	1108018
Instrument:	HP5972D				

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Phenol-d5	2475.4	1900	77	24 - 113	
Nitrobenzene-d5	1650.3	1130	69	23 - 120	
2-Fluorobiphenyl	1650.3	1260	77	30 - 115	
2,4,6-Tribromophenol	2475.4	2140	86	19 - 122	
p-Terphenyl-d14	1650.3	1180	71	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	313227	5.889	273685	5.881	
Naphthalene-d8	999118	8.591	824422	8.59	
Acenaphthene-d10	537321	12.726	417813	12.726	
Phenanthrene-d10	836529	16.219	737343	16.219	
Chrysene-d12	764574	21.375	583887	21.366	
Perylene-d12	680377	23.469	502197	23.46	

* Value outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8260B

548-099905

Laboratory:	Lionville Laboratory		SDG:	SDG #3629	
Client:	National Security Technologies, LLC		Project:	CAU548	
Matrix:	Soil	Laboratory ID:	1107121-02	File ID:	E072509.D
Sampled:	07/19/11 11:15	Prepared:	07/25/11 10:47	Analyzed:	07/25/11 10:47
Solids:	99.27	Preparation:	SW 5035A/5030A	Initial/Final:	5 g / 5 mL
Batch:	L107261	Sequence:		Calibration:	Instrument: 5972E

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	5.04	U
71-55-6	1,1,1-Trichloroethane	1	5.04	U
79-34-5	1,1,2,2-Tetrachloroethane	1	5.04	U
79-00-5	1,1,2-Trichloroethane	1	5.04	U
75-34-3	1,1-Dichloroethane	1	5.04	U
75-35-4	1,1-Dichloroethene	1	5.04	U
96-18-4	1,2,3-Trichloropropane	1	5.04	U
120-82-1	1,2,4-Trichlorobenzene	1	5.04	U
96-12-8	1,2-Dibromo-3-chloropropane	1	5.04	U
106-93-4	1,2-Dibromoethane	1	5.04	U
95-50-1	1,2-Dichlorobenzene	1	5.04	U
107-06-2	1,2-Dichloroethane	1	5.04	U
78-87-5	1,2-Dichloropropane	1	5.04	U
541-73-1	1,3-Dichlorobenzene	1	5.04	U
106-46-7	1,4-Dichlorobenzene	1	5.04	U
78-93-3	2-Butanone	1	12.1	U
591-78-6	2-Hexanone	1	12.1	U
108-10-1	4-Methyl-2-pentanone	1	12.1	U
67-64-1	Acetone	1	6.98	J
71-43-2	Benzene	1	5.04	U
75-27-4	Bromodichloromethane	1	5.04	U
75-25-2	Bromoform	1	5.04	U
74-83-9	Bromomethane	1	5.04	U
75-15-0	Carbon Disulfide	1	5.04	U
56-23-5	Carbon Tetrachloride	1	5.04	U
108-90-7	Chlorobenzene	1	5.04	U
75-00-3	Chloroethane	1	5.04	U
67-66-3	Chloroform	1	5.04	U
74-87-3	Chloromethane	1	5.04	U
10061-01-5	cis-1,3-Dichloropropene	1	5.04	U
124-48-1	Dibromochloromethane	1	5.04	U
74-95-3	Dibromomethane	1	5.04	U
75-71-8	Dichlorodifluoromethane	1	5.04	U
100-41-4	Ethylbenzene	1	5.04	U
87-68-3	Hexachlorobutadiene	1	5.04	U
75-09-2	Methylene Chloride	1	13.5	B
91-20-3	Naphthalene	1	5.04	U
100-42-5	Styrene	1	5.04	U
127-18-4	Tetrachloroethene	1	5.04	U
108-88-3	Toluene	1	5.04	U

ORGANIC ANALYSIS DATA SHEET
8260B

548-099905

Laboratory:	Lionville Laboratory		SDG:	SDG #3629	
Client:	National Security Technologies, LLC		Project:	CAU548	
Matrix:	Soil	Laboratory ID:	1107121-02	File ID:	E072509.D
Sampled:	07/19/11 11:15	Prepared:	07/25/11 10:47	Analyzed:	07/25/11 10:47
Solids:	99.27	Preparation:	SW 5035A/5030A	Initial/Final:	5 g / 5 mL
Batch:	L107261	Sequence:		Calibration:	Instrument: 5972E

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
156-60-5	trans-1,2-Dichloroethene	1	5.04	U
10061-02-6	trans-1,3-Dichloropropene	1	5.04	U
79-01-6	Trichloroethene	1	5.04	U
75-69-4	Trichlorofluoromethane	1	5.04	U
75-01-4	Vinyl chloride	1	5.04	U
1330-20-7	Xylenes, total	1	5.04	U
563-58-6	1,1-Dichloropropene	1	5.04	U
87-61-6	1,2,3-Trichlorobenzene	1	5.04	U
95-63-6	1,2,4-Trimethylbenzene	1	5.04	U
108-67-8	1,3,5-Trimethylbenzene	1	5.04	U
142-28-9	1,3-Dichloropropane	1	5.04	U
590-20-7	2,2-Dichloropropane	1	5.04	U
95-49-8	2-Chlorotoluene	1	5.04	U
106-43-4	4-Chlorotoluene	1	5.04	U
99-87-6	4-Isopropyltoluene	1	5.04	U
108-86-1	Bromobenzene	1	5.04	U
74-97-5	Bromochloromethane	1	5.04	U
156-59-2	cis-1,2-Dichloroethene	1	5.04	U
76-13-1	Freon-113	1	5.04	U
98-82-8	Isopropylbenzene	1	5.04	U
104-51-8	n-Butylbenzene	1	5.04	U
103-65-1	n-Propylbenzene	1	5.04	U
135-98-8	sec-Butylbenzene	1	5.04	U
98-06-6	tert-Butylbenzene	1	5.04	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	50.367	51.0	101	60 - 130	
Toluene-d8	50.367	50.5	100	72 - 117	
4-Bromofluorobenzene	50.367	50.5	100	72 - 144	

* Value outside of QC limits

Total ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1112101
Client Name: National Security Technologies, LLC
ClientProject ID: CAU 548 V3669

Field ID:	548NSA-V1
Lab ID:	1112101-1

Sample Matrix: SOIL
% Moisture: 1.0
Date Collected: 12-Oct-11
Date Extracted: 12-Dec-11
Date Analyzed: 13-Dec-11
Prep Method: SW3050 Rev B

Prep Batch: IP111212-4
QCBatchID: IP111212-4-3
Run ID: IT111213-2A6
Cleanup: NONE
Basis: Dry Weight
File Name: 111213A.

Sample Aliquot: 1.012 g
Final Volume: 100 ml
Result Units: MG/KG
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	IDL	Result Qualifier	EPA Qualifier
7440-47-3	CHROMIUM	1	20	1	0.051		

Data Package ID: *IT1112101-1*

APPENDIX B

WASTE DISPOSITION DOCUMENTATION

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(1)

NSTec Form FRM-0918

NTS LANDFILL LOAD VERIFICATION

10/07/09 Rev. 01 Page 1 of 2

SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9/10C **LANDFILL**

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: Jim Traynor Phone Number: 5-4756

Location / Origin: CAU 548, Area 12 CAS 12-99-08

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☐ Sampling & Analysis	☐ Process Knowledge	☒ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☐ Paper	☐ Rocks / unaltered geologic materials	☐ Empty containers				
☒ Asphalt	☒ Metal	☐ Wood	☒ Soil	☐ Rubber (excluding tires)	☐ Demolition debris	
☒ Plastic	☒ Wire	☐ Cable	☐ Cloth	☐ Insulation (non-Asbestosform)	☒ Cement & concrete	

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☐ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those materi site. I have verified this through the waste characterization method identified above prohibited and allowable waste items. I have contacted Property Management and h is approved for disposal in the landfill.

Print Name: Brian Konrad

Signature: /s/: Brian Konrad Date: 7/12/11

Note: "Food waste, office trash and animal carcasses do not require a radiological clearance. Freon-containing appliances must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal
RCT Initials
_____ This container/load meets the criteria for no added man-made radioactive material
RC This container/load meets the criteria for Radcon Manual Table 4.2 release limits.
RC This container/load is exempt from survey due to process knowledge and origin.
SIGNATURE: /s/: Signature on File DATE: 7/12/11
BN-0646 (10/05)

SWO USE ONLY

Load Weight (net from scale or estimate): 11,000 Signature of Certifier: /s/: Don Bickford 7/12/11

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NSTec Form FRM-0918

NTS LANDFILL LOAD VERIFICATION

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SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9/10C **LANDFILL**

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: James Traynor Phone Number: 5-4756

Location / Origin: CAU 548 Area 9, CAS 09-99-02, Burn Pile

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☒ Sampling & Analysis	☐ Process Knowledge	☐ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☒ Paper	☐ Rocks / unaltered geologic materials	☐ Empty containers	☒ Asphalt	☐ Metal	☒ Wood	☒ Soil
☐ Rubber (excluding tires)	☒ Demolition debris	☐ Plastic	☒ Wire	☐ Cable	☒ Cloth	☐ Insulation (non-Asbestosform)
☒ Cement & concrete						

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☒ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those mate site. I have verified this through the waste characterization method identified abov prohibited and allowable waste items. I have contacted Property Management and is approved for disposal in the landfill.

Print Name: Brian Konrad

Signature: /s/: Brian Konrad Date: 7/14/11

Note: "Food waste, office trash and animal carcasses do not require a radiological must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal
RCT Initials

____ This container/load meets the criteria for no added man-made radioactive material

____ This container/load meets the criteria for Radcon Manual Table 4.2 release limits.

X This container/load is exempt from survey due to process knowledge and origin.

SIGNATURE: /s/: Signature on File DATE: 7/14/11

BN-0646 (10/05)

SWO USE ONLY

Load Weight (net from scale or estimate): 21,660 7/14/11 Signature of Certifier: /s/: Don Bickford

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NTS LANDFILL LOAD VERIFICATION

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SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9/10C LANDFILL

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: Jim Traynor Phone Number: 5-4756

Location / Origin: CAU 548, Area 10 CAS 10-22-38

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☐ Sampling & Analysis	☐ Process Knowledge	☒ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☐ Paper	☐ Rocks / unaltered geologic materials	☒ Empty containers				
☐ Asphalt	☒ Metal	☒ Wood	☒ Soil	☐ Rubber (excluding tires)	☐ Demolition debris	
☒ Plastic	☒ Wire	☒ Cable	☐ Cloth	☐ Insulation (non-Asbestosform)	☒ Cement & concrete	

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☐ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those mate site. I have verified this through the waste characterization method identified abov prohibited and allowable waste items. I have contacted Property Management and is approved for disposal in the landfill.

Print Name: Brian Konrad

Signature: /s/: Brian Konrad Date: 7/14/11

Note: "Food waste, office trash and animal carcasses do not require a radiological c must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal
RCT Initials
____ This container/load meets the criteria for no added man-made radioactive material
X This container/load meets the criteria for Radcon Manual Table 4.2 release limits.
____ This container/load is exempt from survey due to process knowledge and origin.
SIGNATURE: /s/: Signature on File DATE: 7/14/11
BN-0646 (10/05)

SWO USE ONLY

Load Weight (net from scale or estimate): 2600 7/14/11 Signature of Certifier: /s/: Don Bickford

NSTec Form FRM-0918

NTS LANDFILL LOAD VERIFICATION

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SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9/10C LANDFILL

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: James Traynor Phone Number: 5-4756

Location / Origin: CAU 548 Area 9, CAS 09-99-07

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☒ Sampling & Analysis	☐ Process Knowledge	☐ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☒ Asphalt	☐ Metal	☒ Wood	☒ Soil	☐ Rocks / unaltered geologic materials	☐ Empty containers	
☐ Plastic	☒ Wire	☐ Cable	☒ Cloth	☐ Insulation (non-Asbestosform)	☒ Demolition debris	☒ Cement & concrete

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☒ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERA

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Wa knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains onl site. I have verified this through the waste characterization method id prohibited and allowable waste items. I have contacted Property Mana is approved for disposal in the landfill.

Radiological Survey Release for Waste Disposal

RCT Initials

_____ **This container/load meets the criteria for no added man-made radioactive material**

_____ **This container/load meets the criteria for Radcon Manual Table 4.2 release limits.**

_____ **This container/load is exempt from survey due to process knowledge and origin.**

SIGNATURE: /s/: Signature on File **DATE:** 7-19-11

FRM-0646 (08/06)

If applicable, place FRM-0646, "Radiological Release Sticker" here. Onsite use only.

Print Name: Brian Konrad

Signature: /s/: Brian Konrad Date: 7/14/11

Note: "Food waste, office trash and animal carcasses do not require a radiological clearance. Freon-containing appliances must have signed removal certification statement with Load Verification."

SWO USE ONLY

Load Weight (net from scale or estimate): 19,540 7/19/11 Signature of Certifier: /s/: Don Bickford

NSTec Form FRM-0918

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NTS LANDFILL LOAD VERIFICATION

10/07/09 Rev. 01 Page 1 of 2

SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9/10C **LANDFILL**

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: James Traynor Phone Number: 5-4756

Location / Origin: CAU 548 Area 9, CAS 09-99-02, Burn Pile

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☒ Sampling & Analysis	☐ Process Knowledge	☐ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☒ Asphalt	☐ Metal	☒ Wood	☒ Paper	☐ Rocks / unaltered geologic materials	☐ Empty containers	
☐ Plastic	☒ Wire	☐ Cable	☒ Soil	☐ Rubber (excluding tires)	☒ Demolition debris	
☐ Cloth	☐ Insulation (non-Asbestosform)	☒ Cement & concrete				

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☒ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those materials that are allowed for disposal at this site. I have verified this through the waste characterization method identified a[bove] prohibited and allowable waste items. I have contacted Property Management [and] is approved for disposal in the landfill.

Print Name: Brian Konrad

Signature: /s/: Brian Konrad Date: 7/14/1[1]

Note: "Food waste, office trash and animal carcasses do not require a radiologic[al] must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal

RCT Initials

___ This container/load meets the criteria for no added man-made radioactive material

___ This container/load meets the criteria for Radcon Manual Table 4.2 release limits.

X This container/load is exempt from survey due to process knowledge and origin.

SIGNATURE: /s/: Signature on File DATE: 7/20/11

BN-0646 (10/05)

SWO USE ONLY

Load Weight (net from scale or estimate): 10320 7/21/11 Signature of Certifier: /s/: Signature on File

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NSTec Form FRM-0918

NTS LANDFILL LOAD VERIFICATION

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SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9 ☒ **LANDFILL**

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: MIKE FLOYD Phone Number: 295-6653

Location / Origin: CAU 548 --CAS 20-22-07 --area 20

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type:	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
(check one)	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☐ Sampling & Analysis	☒ Process Knowledge	☐ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☐ Asphalt	☒ Metal	☐ Wood	☐ Soil	☐ Rocks / unaltered geologic materials	☐ Empty containers
☐ Plastic	☐ Wire	☐ Cable	☐ Cloth	☐ Rubber (excluding tires)	☐ Demolition debris
				☐ Insulation (non-Asbestosform)	☐ Cement & concrete

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☒ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☐ Hydrocarbons (contact SWO)	☐ Other _____	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those materials that are allowed for disposal at this site. I have verified this through the waste characterization method identified abov prohibited and allowable waste items. I have contacted Property Management and is approved for disposal in the landfill.

Print Name: MIKE FLOYD

Signature: /s/: Mike Floyd Date: 7/25/11

Note: "Food waste, office trash and animal carcasses do not require a radiological c must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal

RCT Initials

___ This container/load meets the criteria for no added man-made radioactive material

X This container/load meets the criteria for Radcon Manual Table 4.2 release limits.

___ This container/load is exempt from survey due to process knowledge and origin.

SIGNATURE: /s/: Signature on File DATE: 7/25/11

FRM-0646 (08/06)

SWO USE ONLY

Load Weight (net from scale or estimate): 100 7/26/11 Signature of Certifier: /s/: Signature on File

(1)

NSTec Form FRM-0918

NTS LANDFILL LOAD VERIFICATION

08/23/06 Rev. 0 Page 1 of 2

SWO USE (Select One) AREA ☐ 23 ☐ 6 ☒ 9 ☒ **LANDFILL**

For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898.

REQUIRED: WASTE GERERATOR INFORMATION

(This form is for rolloffs, dump trucks, and other onsite disposal of materials.)

Waste Generator: MIKE FLOYD Phone Number: 295-6653

Location / Origin: CAU 548 --CAS 20-22-07 --area 20 FAX - 5-7761 / 7918

Waste Category: (check one)		☐ Commercial	☒ Industrial	
Waste Type: (check one)	☒ NTS	☐ Putrescrible	☒ FFACO-onsite	☐ WAC Exception
	☐ Non-Putrescible	☐ Asbestos Containing Material	☐ FFACO-offsite	☐ Historic DOE/NV
Pollution Prevention Category: (check one)		☒ Environmental management	☐ Defense Projects	☐ YMP
Pollution Prevention Category: (check one)		☒ Clean-Up	☐ Routine	
Method of Characterization: (check one)		☒ Sampling & Analysis	☒ Process Knowledge	☐ Contents

Prohibited Waste at all three NTS landfills: Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels, and Medical wastes (needles, sharps, bloody clothing).

Additional Prohibited Waste at the Area 9 U10C Landfill: Sewage Sludge, Animal carcasses, Wet garbage (food waste); and Friable asbestos

REQUIRED: WASTE CONTENTS ALLOWABLE WASTES

Check all allowable wastes that are contained within this load:

NOTE: Waste disposal at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants, such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol.

Acceptable waste at any NTS landfill:

☐ Asphalt	☒ Metal	☐ Wood	☐ Soil	☐ Rubber (excluding tires)	☒ Empty containers	☐ Demolition debris
☐ Plastic	☐ Wire	☐ Cable	☐ Cloth	☐ Insulation (non-Asbestosform)		☐ Cement & concrete

☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.)

Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office Waste ☐ Food Waste ☐ Animal Carcasses

☐ Asbestos ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: _____

Additional waste accepted at the Area 9 U10c Landfill:

☐ Non-friable asbestos	☐ Drained automobiles and military vehicles	☐ Solid fractions from sand/oil/water
☐ Light ballasts (contact SWO)	☐ Drained fuel filters (gas & diesel)	☐ Deconned Underground and Above Ground Tanks
☐ Hydrocarbons (contact SWO)	☒ Other tires packaged within a B25 box	

Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ _____

☐ Septic sludge	☐ Rags	☐ Drained fuel filters (gas & diesel)	☐ Crushed non-teme plated oil filters
☐ Plants	☐ Soil	☐ Sludge from sand/oil/water separators	☐ PCBs below 50 parts per million

REQUIRED: WASTE GENERATOR SIGNATURE

Initials: _____ (if initialed, no radiological clearance is necessary.)

The above mentioned waste was generated outside of a Controlled Waste Managem knowledge, does not contain radiological materials.

To the best of my knowledge, the waste described above contains only those mater site. I have verified this through the waste characterization method identified above prohibited and allowable waste items. I have contacted Property Management and is approved for disposal in the landfill.

Print Name: MIKE FLOYD

Signature: /s/: Mike Floyd Date: 10/11/11

Note: "Food waste, office trash and animal carcasses do not require a radiological clearance. Freon-containing appliances must have signed removal certification statement with Load Verification."

Radiological Survey Release for Waste Disposal

RCT Initials

PCS ☐ This container/load meets the criteria for no added man-made radioactive material

☐ This container/load meets the criteria for Radcon Manual Table 4.2 release limits.

☐ This container/load is exempt from survey due to process knowledge and origin.

SIGNATURE: /s/: Signature on File DATE: 10/11/11

FRM-0646 (08/06)

SWO USE ONLY

Load Weight (net from scale or estimate): 2500 10/11/11 Signature of Certifier: /s/: Signature on File

NSTec Form FRM-2217	CERTIFICATE OF DISPOSAL (LOW LEVEL WASTE)	03/01/10 Rev. 01 Page 1 of 1

Nevada Test Site

This Certificate acknowledges that the following shipment(s) of waste have been disposed at the Nevada Test Site Radioactive Waste Management Complex.

Shipment Number	Waste Stream Identification #	Package #	Date of Disposal
DPL11111	LRY5LLFY11005	340000	08-03-2011

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: Theresa Hale
WGS Signature

08-03-2011
Date

Waste Inspector
Title

/s/: Stephen E. Wolf
RWMC Signature

08-03-2011
Date

Waste Specialist
Title

NSTec Form FRM-2217	CERTIFICATE OF DISPOSAL (LOW LEVEL WASTE)	03/01/10 Rev. 01 Page 1 of 1

Nevada Test Site

This Certificate acknowledges that the following shipment(s) of waste have been disposed at the Nevada Test Site Radioactive Waste Management Complex.

Shipment Number	Waste Stream Identification #	Package #	Date of Disposal
DPL12012	LRY5LLFY99020	12L018 (114154-20)	11/30/11

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: Robert H. Zion
WGS Signature

11/30/11
Date

Waste Inspector
Title

/s/: Jon Tanaka
RWMC Signature

11/30/2011
Date

WASTE SPECIALIST
Title

(Reference: OP-2151.304)

NSTec rm RM-2217	**CERTIFICATE OF DISPOSAL** **(LOW LEVEL WASTE)**	03/01/10 Rev. 01 Page 1 of 1

Nevada Test Site

This Certificate acknowledges that the following shipment(s) of waste have been disposed at the Nevada Test Site Radioactive Waste Management Complex.

Shipment Number	Waste Stream Identification #	Package #	Date of Disposal
DPL12013	LRY5LLFY11005	610006	1/4/12
DPL12013	LRY5LLFY11005	610023	1/4/12
DPL12013	LRY5LLFY11005	610025	1/4/12
DPL12013	LRY5LLFY11005	610019	1/4/12
DPL12013	LRY5LLFY11005	610018	1/4/12

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: Robert H. Zion — 1/4/12

WGS Signature — Date

Waste Inspector

Title

/s/: Stephen E. Wolf — 1/4/12

RWMC Signature — Date

Waste Specialist

Title

NSTec Form FRM-2217	CERTIFICATE OF DISPOSAL (LOW LEVEL WASTE)	03/01/10 Rev. 01 Page 1 of 1

Nevada Test Site

This Certificate acknowledges that the following shipment(s) of waste have been disposed at the Nevada Test Site Radioactive Waste Management Complex.

Shipment Number	Waste Stream Identification #	Package #	Date of Disposal
DPL12014	LRY5LLFY11005	610002	1-5-12
DPL12014	LRY5LLFY11005	610004	1-5-12
DPL12014	LRY5LLFY11005	610016	1-5-12

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: Robert H. Zion
WGS Signature

1-5-12
Date

Waste Inspector
Title

/s/: Stephen E. Wolf
RWMC Signature

1-5-12
Date

Waste Specialist
Title

NSTec Form FRM-2217	CERTIFICATE OF DISPOSAL (LOW LEVEL WASTE)	03/01/10 Rev. 01 Page 1 of 1

Nevada Test Site

This Certificate acknowledges that the following shipment(s) of waste have been disposed at the Nevada Test Site Radioactive Waste Management Complex.

Shipment Number	Waste Stream Identification #	Package #	Date of Disposal
DPL12015	LRY5LLFY11005	610020	1-5-12

This certification ~~is~~ provided as a courtesy to the waste generator for information purposes only.

/s/: Robert H. Zion — 1-5-12

WGS Signature — Date

Waste Inspector

Title

/s/: Stephen E. Wolf — 1-5-12

RWMC Signature — Date

Waste Specialist

Title

NSTec Form FRM-1929	CERTIFICATE OF DISPOSAL (MIXED LOW-LEVEL)	08/02/06 Rev. 0 Page 1 of 1

National Security Technologies LLC
For U.S. Department of Energy Waste Management
Nevada National Security Site - Zone 2
Mercury, NV 89023

EPA ID NV3890090001

This Certificate acknowledges that the following shipment(s) of manifested MIXED LOW- LEVEL waste have been disposed at the Nevada National Security Site Radioactive Waste Management Site.

Shipment Number	Uniform Hazardous Waste Manifest Number	Date(s) of Disposal	Volume Ft^3 (m^3)	Disposal Process
DPM12002	000000012N42	06/27/2012	450.27 (12.75)	Landfill
DPM12003	000000012N43	06/27/2012	450.27 (12.75)	Landfill
DPM12004	000000012N44	06/27/2012	450.27 (12.75)	Landfill
DPM12005	000000012N45	06/27/2012	450.27 (12.75)	Landfill
DPM12006	000000012N46	06/27/2012	360.21 (10.20)	Landfill

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: Rose C. Denton for Patrick Arnold
Signature

7-2-2012
Date

Program Manager, Radioactive Waste Program
Title

Instructions:
Shipment Number – enter shipment number from LWIS database.
Uniform Hazardous Waste Manifest Number – enter number from UHWM provided by generator.
Date of Disposal -- enter date waste was placed in disposal cell.
Volume – enter shipment volume in cubic feet and equivalent cubic meters in parenthesis.
Disposal Process -- enter Landfill.

NSTec Form FRM-1929	**CERTIFICATE OF DISPOSAL** **(MIXED LOW-LEVEL)**	08/02/06 Rev. 0 Page **1** of **1**

National Security Technologies LLC
For U.S. Department of Energy Waste Management
Nevada National Security Site - Zone 2
Mercury, NV 89023

EPA ID NV3890090001

This Certificate acknowledges that the following shipment(s) of manifested MIXED LOW- LEVEL waste have been disposed at the Nevada National Security Site Radioactive Waste Management Site.

Shipment Number	Uniform Hazardous Waste Manifest Number	Date(s) of Disposal	Volume Ft^3 (m^3)	Disposal Process
DPM12007	000000012N49	07/31/2012	128.19 (3.63)	Landfill

This certification is provided as a courtesy to the waste generator for information purposes only.

/s/: P. M. Arnold
Signature

8/16/12
Date

Program Manager, Radioactive Waste Program
Title

Instructions:
Shipment Number – enter shipment number from LWIS database.
Uniform Hazardous Waste Manifest Number – enter number from UHWM provided by generator.
Date of Disposal – enter date waste was placed in disposal cell.
Volume – enter shipment volume in cubic feet and equivalent cubic meters in parenthesis.
Disposal Process – enter Landfill.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NV3890090001	3	(702)295-0311	000956255 FLE

GENERATOR

5. Generator's Name and Mailing Address

NSTEC FOR USDOE
P.O. BOX 98521, M/S NNSS-110
LAS VEGAS NV 89193
Generator's Phone: (702)295-7365

Generator's Site Address (if different than mailing address)

NSTEC FOR USDOE
NEVADA NATIONAL SECURITY SITE, M/S NNSS-110
MERCURY NV 89023

6. Transporter 1 Company Name: CAST TRANSPORTATION — U.S. EPA ID Number: COR000005389

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

U.S. ECOLOGY
HWY 95, 12 MI. SOUTH OF BEATTY
BEATTY NV 89003
Facility's Phone: (800)239-3943

U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN2315, Waste Polychlorinated biphenyls, liquid, mixture, 9, III. OSD 4/19/11.	1	DM	218	K	D006 D008 D018 D019 D020 D021
RQ	2. UN3432, Polychlorinated biphenyls, solid, 9, III. OSD 11/22/11.	1	DM	33	K	
RQ	3. UN1203, Waste Gasoline, 3, II (D018, xylene).	1	DM	471	P	D001 D018
RQ	4. UN1268, Waste Petroleum distillates, n.o.s. (cadmium, selenium), 3, III (D001).	1	DM	185	P	D001 D006 D010

14. Special Handling Instructions and Additional Information

1. ERG 171;NS-NSS-11-0068;D022 THRU D043;#070178976-0. 2. ERG 171;12-0014;#13-1022. 3. ERG 128;11-0079;#13-9713. 4. ERG 128;12-0003;#13-0955. LOAD #12001.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: CIRILO CARLOS GONZALES ON BEHALF OF USDOE — Signature: /s/: Cirilo Carlos Gonzales — Month 01 Day 17 Year 12

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Hardy Thomas — Signature: /s/: Hardy Thomas — Month 1 Day 17 Year 12

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H132	~~H141~~ H142	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tyler Young — Signature: /s/: Tyler Young — Month 1 Day 17 Year 12

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number
	NV3890090001	2 of 3	000956255 FLE

24. Generator's Name: NSTEC FOR USDOE
P.O. BOX 98521, M/S NNSS-110
LAS VEGAS NV 89193

25. Transporter _____ Company Name — U.S. EPA ID Number

26. Transporter _____ Company Name — U.S. EPA ID Number

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
X	5. UN2924, Waste Flammable liquids, corrosive, n.o.s., 3, (8), II. Labpack.	1	DM	165	P	D001	D002	U003
RQ	6. NA3077, Hazardous waste, solid, n.o.s. (benzene, toluene), 9, III (D018).	1	DM	304	P	D018		
RQ	7. NA3077, Hazardous waste, solid, n.o.s. (lead), 9, III (D008).	15	DM	10125	P	D008		
X	8. NA3077, Hazardous waste, solid, n.o.s. (lead), 9, III.	3	DM	557	P	D008		
X	9. NA3077, Hazardous waste, solid, n.o.s. (mercury), 9, III.	1	DF	36	P	D009		
RQ	10. NA3082, Hazardous waste, liquid, n.o.s. (lead), 9, III (D008).	2	DM	631	P	D008		
X	11. NA3082, Hazardous waste, liquid, n.o.s. (polymeric diphenylmethane diisocyanate, zinc borate), 9, III.	1	DF	20	P	D003		
X	12. NA3082, Hazardous waste, liquid, n.o.s., 9, III. Labpack.	1	DF	3	P	D004		
X	13. NA3082, Hazardous waste, liquid, n.o.s., 9, III. Labpack.	1	DF	10	P	D011		
RQ	14. UN2794, Waste Batteries, wet, filled with acid, 8, III (D008).	2	DF	391	P	D002	D004	D008

32. Special Handling Instructions and Additional Information

5. ERG 132;12-0010;#13-1015 LP. 6. ERG 171;11-0080;#14-5294. 7. ERG 171;11-0086 TO -0089,12-0015 TO -0025;#13-1019. 8. ERG 171;11-0085,-0100,12-0001;#13-1506. 9. ERG 171;12-0002;#13-1519. 10. ERG 171;11-0098,-0099;#13-3442-1. 11. ERG 171;12-0004;#0701854-0. 12. ERG 171;11-0081;#13-1016 LP. 13. ERG 171;12-0012;#13-1016 LP. 14. ERG 154;12-0007,-0008;#13-1009. LOAD #12001.

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

H141	H141	H132	H132	H141
H141	H141	H132	H132	H141

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number
	NV3890090001	3 of 3	000956255 FLE

24. Generator's Name
NSTEC FOR USDOE
P.O. BOX 98521, M/S NNSS-110
LAS VEGAS NV 89193

25. Transporter _____ Company Name — U.S. EPA ID Number

26. Transporter _____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
X	15. UN2794, Waste Batteries, wet, filled with acid, 8, III.	2	DF	37	P	D002 D008
X	16. Waste Consumer Commodity, ORM-D	1	DM	37	P	D001 D005 D035 D040 U228
X	17. UN3264, Waste Corrosive liquid, acidic, inorganic, n.o.s., 8, III. Labpack.	1	DF	14	P	D002 D008
X	18. UN1719, Waste Caustic alkali liquids, n.o.s. (sodium metasilicate, butyl cellosolve), 8, II.	1	DF	380	P	D002

GENERATOR

32. Special Handling Instructions and Additional Information
15. ERG 154;11-0091,12-0005;#13-1009. 16. ERG 171;12-0009;#13-0956. 17. ERG 154;12-0011;#13-1016 LP. 18. ERG 154;12-0006;#070137715-345. LOAD #12001.

per TC w/ Brett Bushnell 2/7/12

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

H141	H141	H141	H132

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APPENDIX C

SECTORED HOUSEKEEPING SITE CLOSURE VERIFICATION FORMS

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Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 07/14/2011
CAU Number: 548
CAS Number: 09-99-02
CAS Description: Material Piles (2)
Sector Designation: Sector F
Housekeeping Site General Location: U-9av
Northing: 4,109,241.14 m (UTM, Zone 11) **Easting:** 585,632.62 m (UTM, Zone 11)
Latitude: 37.1274 **Longitude:** -116.0360
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed to 2-03 Road. Turn right (north) on 2-03 Road and proceed 0.5 mile to 9-01 Road. Turn right (east) on 9-01 Road and proceed approximately 2.11 miles to Old Mercury Highway. Turn left (north) on Old Mercury Highway and proceed 0.4 mile to 9-V Road. Turn right (east) on 9-V Road and proceed 0.2 mile. The U-9av Crater is on the right (south). The site is located approximately 100 ft north of the U-9av Crater, just east of an elongated pit.

Waste Item(s) Originally at Site	Apparent Waste Type*
Two large piles of what appears to be lime	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The material pile was removed and disposed at the Area 9 U10c Sanitary Landfill.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	SIGNATURE APPROVED	06/06/2012
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

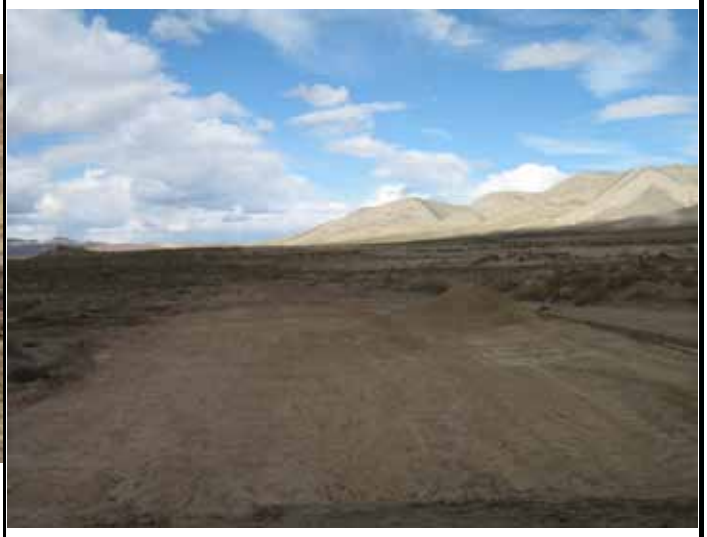
Closure Verification Date: 10/06/2011
CAU Number: 548
CAS Number: 09-99-04
CAS Description: Wax, Paraffin
Sector Designation: Sector F
Housekeeping Site General Location: U-9av
Northing: 4,109,192.86 m (UTM, Zone 11) **Easting:** 585,667.3 m (UTM, Zone 11)
Latitude: 37.1270 **Longitude:** -116.0356
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed to 2-03 Road. Turn right (north) on 2-03 Road and proceed 0.5 mile to 9-01 Road. Turn right (east) on 9-01 Road and proceed approximately 2.11 miles to Old Mercury Highway. Turn left (north) on Old Mercury Highway and proceed 0.4 mile to 9V Road. Turn right (east) on 9V Road and proceed 0.2 mile to the U-9av Crater on the right (south). The site is located near the northeast side of the U-9av Crater.

Waste Item(s) Originally at Site	Apparent Waste Type*
A copious quantity of melted wax or paraffin	Mixed

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure



Housekeeping Site After Closure

Current Site Description/Observations: The material pile and soil was removed, packaged in nine B-25 boxes, treated at an offsite treatment facility, and disposed as mixed waste at the Area 5 Radioactive Waste Management Site.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 07/18/2011
CAU Number: 548
CAS Number: 09-99-05
CAS Description: Asbestos, Vermiculite
Sector Designation: Sector F
Housekeeping Site General Location: U-9av
Northing: 4,109,192.68 m (UTM, Zone 11) **Easting:** 585,667.27 m (UTM, Zone 11)
Latitude: 37.1270 **Longitude:** -116.0356
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed to 2-03 Road. Turn right (north) on 2-03 Road and proceed 0.5 mile to 9-01 Road. Turn right (east) on 9-01 Road and proceed approximately 2.11 miles to Old Mercury Highway. Turn left (north) on Old Mercury Highway and proceed 0.4 mile to 9V Road. Turn right (east) on 9V Road and proceed 0.2 mile to the U-9av Crater on the right (south). The site is located near the northeast side of the U-9av Crater.

Waste Item(s) Originally at Site	Apparent Waste Type*
Quantity of material which appears to be asbestos or charred vermiculite	Radioactive

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The material pile was removed, packaged in one B-25 box, and disposed as low-level waste at the Area 5 Radioactive Waste Management Site.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 07/14/2011
CAU Number: 548
CAS Number: 09-99-07
CAS Description: Tar Spill
Sector Designation: Sector F
Housekeeping Site General Location: U-9 ITS V-26
Northing: 4,110,542.27 m (UTM, Zone 11) **Easting:** 585,569.85 m (UTM, Zone 11)
Latitude: 37.1392 **Longitude:** -116.0366
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed to 2-03 Road. Turn right (north) on 2-03 Road and proceed 0.5 mile to 9-01 Road. Turn right (east) on 9-01 Road and proceed approximately 2.11 miles to Old Mercury Highway. Turn left (north) on Old Mercury Highway and proceed 1.15 miles to RSM 9L-23. Turn left (west) and travel cross country approximately 250 ft to the south side of the U-9 ITS V-26 Crater. The spill is located on the south edge of the crater.

Waste Item(s) Originally at Site	Apparent Waste Type*
Tar spill about 10' x 5'	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The tar spill was removed and disposed at the Area 9 U10c Sanitary Landfill.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 07/14/2011
CAU Number: 548
CAS Number: 10-22-38
CAS Description: Drum; Cable
Sector Designation: Sector F
Housekeeping Site General Location: Teapot Crater
Northing: 4,113,609 m (UTM, Zone 11) **Easting:** 584,830 m (UTM, Zone 11)
Latitude: 37.1669 **Longitude:** -116.0445
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) onto Rainier Mesa Road and proceed to 2-07 Road. Turn right (east) and proceed to the Circle Road intersection. Turn left (north) on Circle Road and proceed 0.7 mile to 10-01 Road. Turn right (east) on 10-01 Road and proceed 1.0 mile. The site is 300 ft and 200 degrees from the Teapot Crater.

Waste Item(s) Originally at Site	Apparent Waste Type*
A rusty gas block drum and cables	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The 55-gallon gas block drum, a small can, and wooden debris were removed and disposed at the Area 9 U10c Sanitary Landfill.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 11/09/2010
CAU Number: 548
CAS Number: 12-99-04
CAS Description: Epoxy Tar Spill
Sector Designation: Sector F
Housekeeping Site General Location: U-12g.03 CH 2
Northing: 4,114,146.65 m (UTM, Zone 11) **Easting:** 570,145.59 m (UTM, Zone 11)
Latitude: 37.1729 **Longitude:** -116.2099
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed through the Area 12 Camp to Stockade Wash Road. Continue on Stockade Wash Road to R Road. Proceed on R Road to the fork in the road. Take the right fork onto P Road. Proceed to RSM 12P-5 and continue 0.05 mile downhill to the right. The site is approximately 300 ft beyond this point.

Waste Item(s) Originally at Site	Apparent Waste Type*
An epoxy tar spill down the slope from the work area	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The spill originally described at the site was determined to be a deteriorated 200-foot long drainage channel constructed to control water flow from a concrete pad. Due to the absence of contamination and the inability of heavy equipment to access the area, no further action was required, and no closure activities were performed.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 07/12/2011
CAU Number: 548
CAS Number: 12-99-08
CAS Description: Cement Spill
Sector Designation: Sector F
Housekeeping Site General Location: Area 12 Fire Station
Northing: 4,116,527.78 m (UTM, Zone 11) **Easting:** 574,495.89 m (UTM, Zone 11)
Latitude: 37.1941 **Longitude:** -116.1606
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Rainier Mesa Road. Turn left (northwest) on Rainier Mesa Road and proceed to the Area 12 Camp. Turn right (north) on Logan Street and proceed approximately 0.15 mile. Turn left (west) onto Rainier Street and proceed approximately 0.2 mile to the fire station. The site is approximately 200 ft north of the fire station, and 45 ft (315 degrees) from the stop sign.

Waste Item(s) Originally at Site	Apparent Waste Type*
Caustic cement spill	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The cement and asphalt piles were removed and disposed at the Area 9 U10c Sanitary Landfill.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 11/09/2010
CAU Number: 548
CAS Number: 18-14-01
CAS Description: Transformers (3)
Sector Designation: Sector G
Housekeeping Site General Location: 17 Camp
Northing: 4,112,881 m (UTM, Zone 11) **Easting:** 565,332 m (UTM, Zone 11)
Latitude: 37.1619 **Longitude:** -116.2642
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway (north) to Tippipah Highway. Turn left (northwest) onto Tippipah Highway and proceed to Pahute Mesa Road. Turn left (west) onto Pahute Mesa Road and proceed approximately 1.3 miles past the Stockade Wash Road to the intersection of Pahute Mesa Road and 18-B Road. Pahute C.P. (17 Camp) is on the southwest corner of the intersection. The site is on west side of the Area 17 Camp, within a chain-link (cyclone) fence.

Waste Item(s) Originally at Site	Apparent Waste Type*
There are three each transformers at the base of the power poles (south, east, and west) providing power for security lights at the Control Point Security Compound	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure	Housekeeping Site After Closure
Not available	

Current Site Description/Observations: Three junction boxes containing wires were found. Transformers were not located at this site. No further action was required, and no closure activities were performed.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 11/09/2010
CAU Number: 548
CAS Number: 19-22-01
CAS Description: Drums
Sector Designation: Sector G
Housekeeping Site General Location: U-19ab
Northing: 4,122,784.25 m (UTM, Zone 11) **Easting:** 560,001.25 m (UTM, Zone 11)
Latitude: 37.2515 **Longitude:** -116.3243
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Tippipah Highway. Turn left (west) on Tippipah Highway and proceed to Pahute Mesa Road. Turn left (west) onto a steep dirt road across from Dead Horse Flats Road. Travel approximately 0.65 mile to the U-19ab Crater.

Waste Item(s) Originally at Site	Apparent Waste Type*
In an open trench about 100 yards west of U-19ab, there is a 5-gallon, closed-top bucket with a label stating, "Asbestolite Lead Base Compound." Also in the trench are several opened-top yellow drums with unidentified trash, and several 5-gallon, closed-top, metal buckets containing unidentified solid material. Southwest of GZ about 500 yards is a black, opened-top drum containing what appears to be solidified plaster. Further southwest is an empty opened-top yellow drum	Ordinary

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: The drums previously located at the site were not found and are assumed to have been removed. No further action was required, and no closure activities were performed.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	**SIGNATURE APPROVED**	**06/06/2012**
Corrective Action Coordinator/Designee	**Signature**	**Date**

Sectored Housekeeping Site Closure Verification Form

Closure Verification Date: 10/11/2011
CAU Number: 548
CAS Number: 20-22-07
CAS Description: Drums (2)
Sector Designation: Sector G
Housekeeping Site General Location: U-20k
Northing: 4,125,933 m (UTM, Zone 11) **Easting:** 542,166.8 m (UTM, Zone 11)
Latitude: 37.2809 **Longitude:** -116.5243
Coordinate/Elevation Data Obtained from: North American Datum, 1927

Site Access Route: Take Mercury Highway north to Tippipah Highway. Turn left (west) on Tippipah Highway and proceed to Pahute Mesa Road. Turn left (west) and on Pahute Mesa Road and proceed to Airport Road. Turn left (west) on Airport Road, which becomes Buckboard Mesa Road, and travel to Pahute Mesa Road. Turn left (northwest) on Pahute Mesa Road and travel 0.2 mile past RSM 20-J-29, to the U-20k access road. Take the dirt access road to the U-20k Crater on the south side of the road.

Waste Item(s) Originally at Site	Apparent Waste Type*
Two drums	Ordinary, Radioactive, and Mixed

* Ordinary, Scrap Metal, Asbestos, PCB, Salvageable, Hazardous, Radioactive, Mixed, Unknown, Other

Housekeeping Site Before Closure

Housekeeping Site After Closure

Current Site Description/Observations: Five abandoned, empty 55-gallon drums were removed and disposed at the Area 9 U10c Sanitary Landfill. Two abandoned, empty 55-gallon drums were removed and disposed as low-level waste at the Area 5 Radioactive Waste Management Site. One lead acid battery was removed, packaged in a 55-gallon drum, treated at an offsite treatment facility, and disposed as mixed waste at the Area 5 Radioactive Waste Management Site. Tires were removed, packaged in one B-25 box, and disposed at the Area 9 U10c Sanitary Landfill.

X **No Further Action Required at Housekeeping Site**

Alissa Silvas	SIGNATURE APPROVED	06/06/2012
Corrective Action Coordinator/Designee	**Signature**	**Date**

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