

# FACILITY OPERATING PLAN FOR AREA 5 ASBESTOS SOLID WASTE DISPOSAL SITE CLASS III SOLID WASTE DISPOSAL SITE PERMIT NO. SW 532

November 2023

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## **ACRONYMS AND ABBREVIATIONS**

ALLW asbestos low-level waste

BLM Bureau of Land Management
CFR Code of Federal Regulations
CPR Cardiopulmonary Resuscitation

DOE U.S. Department of Energy
EM Environmental Management

LLHB Low-Level Radioactive Hydrocarbon-Burdened

LLW low-level waste

mi mile(s)

M&O Management and Operating

MSTS Mission Support and Test Services, LLC

NAC Nevada Administrative Code

NDEP Nevada Division of Environmental Protection

NNSA/NFO U.S. Department of Energy, National Nuclear Security Administration Nevada

Field Office

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

Office

NNSS Nevada National Security Site

NV Nevada

PCB polychlorinated biphenyl

ppm part(s) per million

RCRA Resource Conservation and Recovery Act

RTR Real-Time Radiography

RWMS Radioactive Waste Management Site

SWDS Solid Waste Disposal Site
TDR time domain reflectometry

WARP Waste Acceptance Review Panel

yd<sup>3</sup> cubic yards(s)

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#### 1. INTRODUCTION

This operating plan describes the facilities, personnel, equipment, environmental controls, and processes that support Nevada solid waste disposal regulations in Nevada Administration Code (NAC) Chapter 444, "Sanitation" (Sections 444.731 through 444.747 for Class III sites). NAC 444.733, "Application for permit to operate Class III site or lateral expansion thereof," states that an application for a Class III site must include a plan for operating the site, as required by NAC 444.684, "Plan for operating." The format of this operating plan follows the outline provided in the Class III Industrial Solid Waste Disposal Site Permit Application Form, Section III, 2. This operating plan applies to the Area 5 Asbestos Class III Solid Waste Disposal Site (SWDS), hereafter referred to as Area 5 SWDS, operated under Permit SW 532. The Area 5 SWDS is located at the Area 5 Radioactive Waste Management Site (RWMS) on the Nevada National Security Site (NNSS).

## i. Area 5 SWDS Permit History

A Notice of Intent to operate a Class III SWDS for disposal of regulated asbestos low-level waste (ALLW) at the Area 5 RWMS was submitted to the Nevada Division of Environmental Protection (NDEP) on January 28, 1994, and was acknowledged as being received in a letter to the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office (NNSA/NSO) (later replaced by the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office [NNSA/NFO]) on August 30, 1994. Interim approval to operate the Class III SWDS was granted on August 12, 1996, with operations to be conducted in accordance with the "Management Plan for the Disposal of Low-Level Waste with Regulated Asbestos Waste." Permit SW 13 000 01 was issued on April 5, 2000, and authorized operation of Pit 7 for disposal of ALLW, with a design capacity of 5,831 cubic yards (yd³).

On August 26, 2002, NDEP approved a permit modification to increase the design capacity of the SWDS to include Pit 6, with an additional capacity of 28,037 yd<sup>3</sup>. This increased the total capacity of the Area 5 SWDS to approximately 33,870 yd<sup>3</sup>.

On October 25, 2010, a permit application was submitted for establishing a new ALLW disposal cell at the Area 5 RWMS, due to closure of the 92-Acre Area that included Pit 6 and Pit 7. Construction of the engineered soil cover over Pit 6 and Pit 7 was conducted between January and May 2011.

On July 22, 2011, NDEP issued Permit SW 523 for operation of a Class III SWDS at the Area 5 RWMS, which included Cell 20, with a design capacity of 250,800 yd<sup>3</sup>.

On July 3, 2012, NDEP issued Permit SW 532 for operation of a Class III SWDS at the Area 5 RWMS, which included Cell 19, with a design capacity of 78,750 yd<sup>3</sup>.

On August 29, 2012, NNSA/NSO submitted a request to combine Permits SW 523 and SW 532 into one permit. The request also noted that the design capacity listed in Permit SW 523 for Cell 20 was inaccurate and should be corrected to 157,500 yd<sup>3</sup>.

On November 2, 2012, NDEP issued Revision 1 of Permit SW 532 and cancelled Permit SW 523. Permit SW 532, Revision 1, included Cell 19 and Cell 20, with a total design capacity of 236,250 yd<sup>3</sup>.

In November 2015, an application was submitted for Revision 2 of Permit SW 532 to expand the Area 5 SWDS to include three new disposal cells (Cells 22, 27, and 28). The proposed disposal cells would add an additional 142,229 yd³ of net disposal capacity, bringing the total volume of net disposal capacity to 273,195 yd³. Revision 2 of Permit SW 532 was issued on January 22, 2016, and included five disposal cells (Cells 19, 20, 22, 27, and 28).

In May 2018, an application was submitted for Revision 3 of Permit SW 532 to expand the Area 5 SWDS to include two new disposal cells (Cells 23 and 24). The proposed disposal cells would add an additional 105,823 yd³ of net disposal capacity, bringing the total volume of net disposal capacity to 367,863 yd³. Revision 3 of Permit SW 532 was issued on July 3, 2018, and included seven disposal

cells (Cells 19, 20, 22, 23, 24, 27, and 28). The total net capacity was listed in Revision 3 of Permit SW 532 as 352,382 yd³. This was corrected to 367,863 yd³ in Revision 4 of Permit SW 532, which was issued on October 8, 2018.

In June 2021, an application was submitted for Revision 5 of Permit SW 532 to remove Cell 23 and Cell 24 from the permit. Cell 23 had only received low-level waste (LLW), and Cell 24 had not received any waste. The revision also updated the net capacities for each disposal cell. Revision 5 of Permit SW 532 was issued on July 9, 2021, and included five disposal cells (Cells 19, 20, 22, 27, and 28).

In January 2022, a draft application was submitted for Revision 6 of Permit SW 532, which fulfilled actions listed in the June 22, 2021, Settlement Agreement associated with 33 containers of weapons-related material originating from the Y-12 site that were disposed at the Area 5 RWMS. In 2024, the final application will be submitted for Revision 6 of Permit SW 532, which will include the following requested changes:

- Removal of Cell 20 from the permit, as the requirements for post-closure monitoring of Cell 20 are included in Resource Conservation and Recovery Act (RCRA) Permit NEV HW0101
- Changing the status of Cell 19 from an active disposal cell to a closed disposal cell with post-closure requirements
- Updating the permitted capacities of the disposal cells
- Removing "Low-Level Radioactive Hydrocarbon-Burdened (LLHB) media and debris and LLHB demolition and construction waste" from the list of permitted waste in Section 4.1 of Permit SW 532
- Removing references to liners in the disposal cells from Sections 2.1 and 2.9 (i) of Permit SW 532
- Removing the requirement for groundwater monitoring from Sections 5.1 (5) and 7 of Permit SW 532 and replacing the requirement with vadose zone monitoring, which will be conducted in lieu of groundwater monitoring
- Removing references to the NNSS Waste Acceptance Criteria in Section 4 of Permit SW 532, and instead referencing the waste characterization and acceptance criteria in Section 2, Subsection vi, of this operating plan
- Less restrictive cover requirements, as described in Section 2, Subsection viii, of this operating plan

#### 2. FACILITY OPERATING PLAN

#### i. Site Overview

The NNSS is approximately 65 miles (mi) northwest of Las Vegas, Nevada. NNSA/NFO is the federal lands management authority for the NNSS, and Mission Support and Test Services, LLC (MSTS) is the Management and Operating (M&O) Contractor. MSTS is the operator of all SWDSs on the NNSS. Access on and off the NNSS is tightly controlled, restricted, and guarded on a 24-hour basis. The NNSS is posted with signs along its entire perimeter. The Nye County Sheriff's Office provides law enforcement support on the NNSS.

The Area 5 SWDS is located at the Area 5 RWMS, which is near the eastern edge of the NNSS, approximately 16 mi north of Mercury, Nevada (see Figure 1). Security safeguards are provided by Area 5 RWMS personnel and engineered structures. The active area of the Area 5 RWMS is surrounded by a fence. "Danger – Unauthorized Personnel Keep Out" signs visible from approximately 25 feet are posted along the fence around the Area 5 RWMS. Entry to and exit from the active area of the Area 5 RWMS is via a controlled gate. All personnel entering the Area 5 RWMS must log in at the main office building before access is granted.

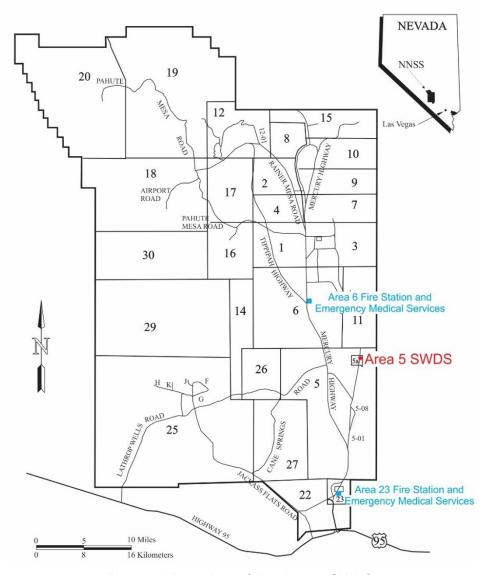


Figure 1. Location of the Area 5 SWDS

The Area 5 SWDS includes three active disposal cells (Cells 22, 27, and 28) and three closed disposal cells (Pit 6, Pit 7, and Cell 19) (see Figure 2). The dimensions, design capacity, and status of each disposal cell are listed in Table 1. The dimensions listed for each disposal cell are the dimensions of the bottom of each disposal cell. The capacities listed for the closed disposal cells in Table 1 are the total actual volumes of waste received in each disposal cell.

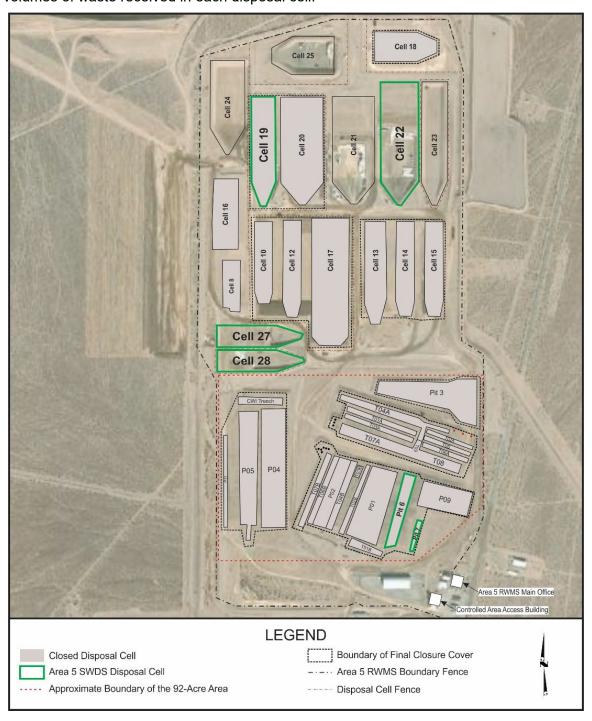


Figure 2. Disposal Cells in the Area 5 SWDS

Disposal Cell	Dimensions (feet)	Design Capacity (yd³)	Status
Pit 6	623 x 98 x 22	29,288*	Closed
Pit 7	249 x 36 x 22	6,701*	Closed
Cell 19	150 x 675 x 21	51,767*	Closed
Cell 22	790 x 280 x 20	162,852	Active
Cell 27	470 x 160 x 12	33,422	Active
Cell 28	470 x 160 x 12	33,422	Active

Table 1. Dimensions and Capacities of Area 5 SWDS Disposal Cells

The design criteria for construction of the Area 5 SWDS disposal cells are the same regardless of the length, width, and depth of the disposal cells. The maximum side slopes are designed using a 1:1 (horizontal:vertical) slope to maintain soil stability. The ramps are designed with an 8–10% grade, with 10% being the maximum slope for access by trucks and cranes.

At least 180 days before commencement of the construction of a new disposal cell in the Area 5 SWDS, an application for modification of Permit SW 532 will be submitted to NDEP.

## ii. Location Requirements (NAC 444.735)

The location of the Area 5 SWDS has been approved by NDEP and has operated at this location in accordance with applicable regulations since interim approval to operate was granted on August 12, 1996. The Area 5 SWDS is suited for the isolation and disposal of waste. The site is located in an access-controlled government facility. The location of the Area 5 SWDS is easily accessible in all kinds of weather to all vehicles expected to use it.

The site has an arid climate with winds that trend to the northeast. Surface run-on is insignificant, and engineered flood control channels and berms that border the Area 5 RWMS provide additional protection from a potential 25-year flood.

Permanent surface waters do not occur within the Frenchman Flat basin where the Area 5 SWDS is located. The uppermost aquifer is approximately 774 feet below the Area 5 RWMS, and there is no pathway to groundwater (MSTS 2023a). Therefore, the risk of water pollution originating from waste at the site is negligible. In addition, all waste accepted for disposal at the Area 5 SWDS is containerized, and waste subject to decomposition such as pathological waste (dead animals) and putrescible animal and vegetable waste are not permitted for disposal.

The types of waste accepted at the Area 5 SWDS are not expected to generate gases. Based on the physical and chemical composition of buried materials and low annual rainfall at the Area 5 SWDS, the generation and accumulation of explosive or toxic gases is considered minimal to nonexistent. Therefore, safeguards against uncontrolled movement or collection of gas originating from the waste is not required.

The Area 5 RWMS has an adequate available quantity of soil cover material that is workable and compactible and does not contain organic material of a quantity and distribution conducive to the harboring or breeding of disease vectors.

The NNSS comprises four land withdrawals. The Department of the Interior, Bureau of Land Management (BLM), withdrew lands from public use for use by the Atomic Energy Commission, the

<sup>\*</sup> Total actual volume of waste received

predecessor to the U.S. Department of Energy (DOE). In 1983, the BLM conducted a land withdrawal review of the NNSS and recommended the withdrawals continue in perpetuity. In 2009, permanent custody of the 740 acres of land where the Area 5 RWMS is located was transferred from the General Services Administration to DOE. The land was determined to be unsuitable for return to the public domain and will therefore remain under DOE control in perpetuity. The current disposal cells in the Area 5 RWMS are subject to DOE O 435.1, "Radioactive Waste Management," which requires protection of the public and the environment for a minimum of 1,000 years after closure.

The nearest residential population centers are Amargosa Valley (approximately 28 mi from the Area 5 SWDS) and Indian Springs (approximately 24 mi from the Area 5 SWDS). The nearest public highway, U.S. Highway 95, is approximately 18 mi from the Area 5 SWDS.

There are no perennial sources of surface water in the vicinity of the Area 5 SWDS. The only natural surface water within 3 mi of the Area 5 SWDS is Frenchman Lake, a playa at the bottom of the closed hydrographic basin. Ephemeral streams convey runoff to the playa, where it may stand for a few days or weeks as a lake before evaporating. The playa is dry throughout most of the year. The uppermost aquifer is approximately 774 feet below the Area 5 SWDS.

## iii. Personnel Requirements (with Levels of Authority)/Training (NAC 444.684)

M&O Contractor Area 5 RWMS personnel are responsible for the day-to-day operation and maintenance of the Area 5 SWDS. The DOE Environmental Management (EM) Nevada (NV) Program is responsible for waste stream approval and shipment authorization. The M&O Contractor Area 5 RWMS Nuclear Facility Manager is responsible for disposal packet approval. The M&O Contractor Area 5 RWMS LLW Supervisor is responsible for shipment refusal.

Personnel who staff the Area 5 SWDS are trained to conduct operations at the Area 5 RWMS. Personnel are trained to verify that each shipment meets requirements. The M&O Contractor is responsible for verifying that personnel assigned to support activities at the Area 5 SWDS meet the training requirements.

Training includes, but is not limited to, Hazardous Waste Site General Worker training, as required by Title 29 Code of Federal Regulations (CFR) Part 1910.120, "Hazardous waste operations and emergency response;" Radiation Worker training, as mandated by 10 CFR 835, "Occupational Radiation Protection;" and Hazard Communication training, as mandated by 29 CFR 1910.1200, "Hazard Communication." In addition, personnel participating in asbestos disposal operations receive an annual Asbestos Awareness training, as required by 29 CFR 1910.1001, "Asbestos." Additional training requirements are listed in Table 2 below.

Employees, including subcontractor personnel, will not participate in field activities until they have been trained to a level required by their job function and responsibility. If work activities create additional training requirements not identified in this operating plan, the appropriate training will be identified, provided, and documented.

**Table 2. Training Requirements** 

Course	Activity-Level Work
Hazardous Waste Site General Worker	Х
General Employee Radiological Training	Х
Asbestos Awareness	Х
Hazard Communication	Х

Course	Activity-Level Work
Fire Extinguishers (video)	Х
Personal Protective Equipment	Х
Driver Safety (for government vehicle use)	Х
Hearing Conservation (if sound levels potentially exceed 85 A-weighted decibels)	Х
Bloodborne Pathogens	Х
First Aid	Х
Cardiopulmonary Resuscitation (CPR)	Х

## iv. Equipment Requirements with Contingencies and Descriptions (NAC 444.684)

The heavy equipment used at the Area 5 SWDS includes a forklift, a front-end loader, a crane, a water truck, and a motor grader. Other types of equipment that may be used at the Area 5 SWDS on an irregular basis include compactors and rollers. Heavy equipment will be deployed on an as-needed basis and may be in addition to those described above.

All equipment is inspected prior to each use, including a check of tools for uneven wear. Machinery and equipment are inspected to ensure that moving parts are properly guarded or isolated. Hoisting and rigging equipment is certified, tested, inspected, and maintained per M&O Contractor procedures.

Inspection of equipment ensures its ability to perform design functions. Defective equipment is removed from service, and warning tags or administrative locks are applied per M&O Contractor procedures. All leaks or malfunctioning equipment are repaired immediately, or the equipment is taken out of service. All equipment is maintained by the M&O Contractor by onsite mechanics or in repair shops on the NNSS.

The M&O Contractor Area 5 RWMS LLW Supervisor ensures that waste container movement is conducted only by trained personnel using approved equipment, per applicable M&O Contractor procedures. Only qualified personnel shall operate or service heavy equipment.

Emergency communication equipment is inspected monthly to ensure adequate inventory and proper operation. Handheld radios used at the Area 5 SWDS are tested daily for proper functioning.

#### v. Litter/Dust Control Program (NAC 444.684)

All waste accepted for disposal at the Area 5 SWDS is containerized or packaged in such a manner that windblown material is not present. The Area 5 SWDS is maintained in an aesthetically pleasing environment. Scavenging and salvaging are not permitted at the Area 5 SWDS.

Water trucks are used to suppress dust on the compacted dirt roads, as necessary, and during operations involving compaction or production of soil cover material.

#### vi. Waste Characterization and Acceptance Criteria (NAC 444.737)

The Area 5 SWDS accepts onsite and offsite containerized waste with an approved DOE nexus. Waste generators approved by the DOE EM NV Program ship regulated ALLW to the Area 5 SWDS for disposal. Generators must demonstrate through process knowledge and/or sampling and analysis that

their waste is an approved waste. Each waste stream is described on a waste profile and is approved through the Waste Acceptance Review Panel (WARP).

Waste disposed at the Area 5 SWDS is subject to random physical and/or chemical screening as required by Permit SW 532 and NAC 444.6665. At a minimum, ten percent of all waste containers received per year at the Area 5 SWDS are screened on site and/or at the waste generator facility prior to shipment to the Area 5 SWDS through physical, chemical, or alternative methods. An alternative screening frequency may be recommended by WARP with NDEP consultation.

For new waste profiles, a generator site visit may be conducted by personnel from the M&O Contractor, NNSA/NFO, NDEP, or other organizations deemed appropriate by the WARP prior to approval of the waste profile. The WARP assesses new waste profiles, revisions to waste profiles, and waste profile recertifications to determine the method of physical screening.

Physical screening methods can include the following:

- Real-Time Radiography (RTR)
- Visual observation of packaging operations
- Other screening methods recommended by WARP

Chemical screening methods can include the following:

- Paint filter test, which verifies the absence of free liquids
- Oxidizer verification, which determines if the waste may contain chemical oxidizers
- Water reactivity verification, which determines if the waste has the potential to vigorously react with water or to form gases or other reaction products
- Cyanide verification, which indicates if the waste releases hydrogen cyanide upon acidification near a pH of 2
- Sulfide verification, which indicates if the waste could release hydrogen sulfide upon acidification near a pH of 2
- Other screening methods recommended by WARP

The recommended screening methods for each waste profile are documented in the WARP meeting minutes. The selected screening methods are documented in the approval to ship letter by the DOE EM NV Program.

LLW is the only radioactive waste accepted at the Area 5 SWDS. LLW is radioactive waste that is not high-level radioactive waste, spent nuclear fuel, transuranic waste, byproduct material (as defined in Section 11e.[2] of the Atomic Energy Act of 1954, as amended), or naturally occurring radioactive material.

LLW accepted for disposal at the Area 5 SWDS can have asbestos-containing components of the following types of material:

- Friable asbestos material
- Category I nonfriable asbestos-containing material that has become friable
- Category I nonfriable asbestos-containing material that has been subjected to sanding, grinding, cutting, or abrading
- Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by 40 CFR 61, Subpart M

In addition, non-radioactive classified waste that may or may not have asbestos-containing components of the types of material listed above is accepted for disposal at the Area 5 SWDS. Classified waste is defined as waste that must be protected from unauthorized access in accordance with 41 CFR 109-1.53, "Management of High-Risk Personal Property," DOE O 471.6, "Information Security," and U.S. Department of Energy, National Nuclear Security Administration Policy NAP-70.4, "Information Security."

Waste must be tested for polychlorinated biphenyls (PCBs) unless process knowledge demonstrates their absence. For disposal at the Area 5 SWDS, ALLW may contain PCBs if the PCB component of the waste meets the requirements for disposal in a facility that is permitted, licensed, or registered by a State as a municipal or non-municipal, non-hazardous waste landfill. Table 3 lists the types of PCB waste that are acceptable for disposal at the Area 5 SWDS.

Table 3. PCB Wastes Accepted for Disposal at the Area 5 SWDS

Type of PCB Waste	Reference
PCB small capacitors	40 CFR 761.60(b)(2)(ii)
PCB hydraulic machines, drained (<1,000 parts per million [ppm] PCBs)	40 CFR 761.60(b)(3)(i)(B)
PCB hydraulic machines, flushed (>1,000 ppm PCBs)	40 CFR 761.60(b)(3)(i)(B)
PCB-contaminated electrical equipment (≥50 ppm but <500 ppm PCBs)	40 CFR 761.60(b)(4)
Other PCB articles with <500 ppm PCBs	40 CFR 761.60(b)(6)(ii)(A)(2)
PCB light ballasts with PCBs in non-leaking capacitors	40 CFR 761.50(b)(2)(i)
Empty PCB containers with <500 ppm PCBs	40 CFR 761.60
PCB bulk product waste >50 ppm that leaches at a rate <10 micrograms of PCBs per liter of water	40 CFR 761.62(b)(1)(ii)
PCB bulk product waste defined as plastic, rubber parts, dried paints or coatings, and building demolition debris that leaches at a rate <10 micrograms of PCBs per liter of water	40 CFR 761.62(b)(1)(i)
PCB remediation waste with <50 ppm PCBs	40 CFR 761.61

In addition, non-radioactive classified waste that may also contain PCBs meeting the requirements for disposal at the Area 5 SWDS is accepted.

The following wastes are not acceptable for disposal at the Area 5 SWDS:

- Hazardous waste, as defined by NAC 444.580
- Waste containing free liquids, as defined by 40 CFR 260.10 and NAC 444.692(4)
- Medical waste, as defined by NAC 444.589
- Pathological waste, as defined by NAC 444.600
- Garbage, as defined by NAC 444.578
- Household waste, as defined by NAC 444.581

Waste is not accepted for disposal at the Area 5 SWDS if it is determined that it is a RCRA-listed hazardous waste or exhibits a RCRA characteristic. Material or environmental media is tested using the RCRA Toxicity Characteristic Leaching Procedure for toxicity characteristic contaminants unless process knowledge demonstrates the absence of these constituents.

Waste containing free liquids, as defined by NAC 444.692(4), is not accepted for disposal at the Area 5 SWDS. Incidental liquids in ALLW packages resulting from wetting with a water and surfactant mixture as required by NAC 444.971(1) are acceptable. If testing is required to verify the absence of free liquids, it is performed by Test Method 9095b, "Paint Filter Liquids Test," described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," U.S. Environmental Protection Agency Publication Number SW 846. Sufficient sorbing material is mixed with waste to ensure that free liquids are not present before being accepted at the Area 5 SWDS. The sorbing material has similar physical and chemical properties to dry, fine-grained soil or meets the criteria established for nonbiodegradable sorbing materials found in 40 CFR 264.314, "Special requirements for bulk and containerized liquids." Coarse materials, which have poor sorbing characteristics and which may induce greater porosity in the compacted lifts, are not used.

Waste is only accepted for disposal while Area 5 SWDS operators are present. At Gate 100, the transport driver is badged for entry onto the NNSS. At the Area 5 RWMS, the transport driver must check in at the main office. Shipping documents and records are reviewed at this time to verify that the shipment is authorized for disposal at the Area 5 SWDS.

## vii. Vector Control (NAC 444.6678)

Because the waste received at the Area 5 SWDS is containerized, no vectors are anticipated.

#### viii. Cover Requirements (NAC 444.688)

Under NAC 444.731(2), NDEP can establish a less restrictive standard for cover requirements for a Class III site if the material is inert and unlikely to create an environmental hazard or threaten the health of the public. Waste disposed at the Area 5 SWDS is inert, unlikely to create an environmental hazard or threaten the health of the public, and packaged in a manner that prevents dust and/or litter from being released into the air. Considering these site conditions, the cover requirements described below are requested for disposal cells identified in Permit SW 532.

Waste containers are stacked in the Area 5 SWDS in such a manner that all portions of each package are no less than 4 feet below the surrounding natural grade. Five complete rows, or approximately 20 feet, plus the stair-step configuration from the front of the waste face, are always exposed (not covered and not trafficable), ensuring a stable working surface for equipment placing the operational cover material. The operational cover consists of clean native soils obtained from areas near the disposal cells.

The waste packaging requirements (e.g., steel drums, lined wooden boxes, steel boxes, or cargo containers) prevent asbestos dust from being released into the air and meet the intent of the requirements for covering asbestos within 24 hours after placement with at least 6 inches of material that is not asbestos in NAC 444.976(d) and daily cover to control disease vectors, fires, odors, and blowing litter in NAC 444.688(b).

Combustible construction and demolition debris will not be disposed at the Area 5 SWDS. Therefore, the requirements of NAC 444.652, "Disposal of special wastes: Construction and demolition wastes," which include cross-sectioned cells separated by compacted cover material, are not applicable.

An operational cover with a minimum thickness of 4 feet is placed over buried waste. The operational cover is graded such that run-on is directed away from the open disposal cell and crowned to prevent pooling and infiltration of precipitation. Cracks, depressions, and erosion are repaired promptly to maintain the integrity of the operational cover.

After each disposal cell in the Area 5 SWDS is full and the final shipment of waste is received, a final engineered closure cover will be constructed over the operational cover. The final closure cover will consist of native soils and will be a minimum of 4.2 feet above grade, so that the total thickness of the closure cover is at least 8.2 feet.

## ix. Inspections and Operating Records (NAC 444.7025)

## a. Inspections

All waste containers are inspected for leaks and integrity as they are off-loaded. If any container is found to be damaged or breached during inspection, off-loading, or disposal, the container is placed on a plastic sheet (or equivalent) in the staging area to minimize the spread of contamination. Damaged containers are evaluated by the M&O Contractor Area 5 RWMS LLW Supervisor, and corrective action is implemented. Examples of corrective actions may include the following:

- Patching the container
- · Taping plastic sheets to wooden containers
- Over-packing

An inspection of the Area 5 SWDS is conducted daily before the start of operations. The inspection is conducted to verify the following:

- Access to the disposal cells is controlled
- Controlled combustible zone is maintained
- · Fire extinguishers are readily accessible
- Exposed waste containers are free of damage, deterioration, and leaks
- Disposal cell walls are free of erosion and instability

Additional weekly inspections of the Area 5 SWDS are conducted to identify the following:

- Erosion of the run-on control structures
- Settling, subsidence, or erosion of operational covers
- Condition of fencing, gates, and signs
- Condition of exposed waste containers
- Good housekeeping practices in the disposal cells

Corrective measures are taken as soon as possible to correct deficiencies. All corrective measures and their completion dates are recorded. Records are kept onsite for the current year and the previous year.

NDEP will be granted entry to the Area 5 SWDS during normal working hours to inspect the facility, equipment, practices, or operations.

#### b. Operating Records and Reporting

An operating record is maintained with the following information:

- Each load of waste that is disposed, including date, time, tractor number, trailer number, waste generator, shipment number, pre-entry radiation readings, waste type and waste stream identification, waste container types, and departure time
- Location of each disposed waste container in the disposal cell
- Identification of personnel entering the Area 5 RWMS
- Routine Area 5 SWDS activities
- Nonroutine events such as unforeseen circumstances

Records are maintained by Area 5 SWDS personnel. The following documentation must be present with each shipment of waste:

- Bill of lading or shipping manifest
- · Weigh ticket or weight identified by another method

Prior to acceptance of a shipment of waste for disposal, Area 5 SWDS personnel ensure that all documentation is complete, accurate, and legible. If the documentation is not acceptable, the shipment may be rejected. The waste may also be rejected if, upon inspection, it is determined that it does not conform to waste acceptance criteria or is inaccurately represented. The amount and source of waste delivered is documented and maintained in the operating record.

Access records and inspection checklists are also maintained in the operating record. All waste disposed at the Area 5 SWDS are recorded in an electronic database for an indefinite period. Hard copy records are stored for at least two years at the Area 5 RWMS. After this period, records are archived at a designated facility. These records include the following information:

- Name, address, and phone number of waste generator and waste transporter
- Quantity of waste disposed in cubic meters or cubic yards and date of receipt
- Bill of lading or shipping manifest with date of departure, number of containers, and type of each container

All information contained in the operating record will be furnished upon request to NDEP or be made available at all reasonable times for inspection by NDEP.

NNSA/NFO submits an annual report to NDEP for the preceding calendar year by January 30 of each year. The annual report includes the following information:

- Total gross weight and volume of ALLW and solid waste disposed at the Area 5 SWDS during the calendar year
- A list of generators who shipped ALLW and/or solid waste to the Area 5 SWDS during the calendar year
- A description of off-normal conditions or deviations from waste acceptance criteria

NNSA/NFO submits a quarterly report to NDEP for the preceding quarter within 30 days following the end of each calendar quarter. The quarterly report includes the following information:

- Gross weight and volume of each shipment of ALLW disposed at the Area 5 SWDS during the reporting period
- A list of generators who shipped ALLW to the Area 5 SWDS during the reporting period

NNSA/NFO submits an annual online report of the weight and volume of waste received at the Area 5 SWDS within 30 days following the end of each calendar year.

NNSA/NFO submits a volume report every 5 years by December 31 of the fifth year with the following information:

- Remaining volume and disposal capacity of each disposal cell in the Area 5 SWDS
- Volume used and waste disposed to date in each disposal cell in the Area 5 SWDS
- Estimated remaining life of each disposal cell in the Area 5 SWDS in years
- A topographic map at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet

## x. Contingency/Emergency Plan (NAC 444.684)

#### a. Fire Protection

Open burning of waste is prohibited by NAC 444.6675, "Operating criteria: Compliance with state implementation plan; open burning of certain solid wastes prohibited." A controlled combustible zone is also maintained at a minimum of 30 feet from exposed waste in each disposal cell to limit the amount of flammable material, and smoking is strictly prohibited in the disposal cells. In addition, ignitable, corrosive, reactive, unreacted explosives, pyrophoric, or incompatible waste forms are strictly prohibited from disposal at the Area 5 SWDS.

However, fires could be initiated through malfunctioning electrical devices or heavy equipment used at the Area 5 SWDS. In addition, range fires outside the Area 5 RWMS of natural origin (e.g., lightning) or artificial origin (e.g., cigarettes, vehicle exhaust systems) may occur. The desert ground cover in the area around the Area 5 RWMS is generally dry and sparse-to-moderate in density. Although fires may spread over wide areas (especially in conjunction with high winds), the intensity of any such fires is expected to be low due to the low density of natural combustible materials inside the Area 5 RWMS.

In the event of a fire, Area 5 SWDS personnel will call the NNSS Fire Department by dialing 911 on the telephone or by using a "Mayday" signal on the NNSS radio communication system. After making this notification, Area 5 SWDS personnel may use handheld fire extinguishers to control small fires. Fire extinguishers are located near the entrance to each disposal cell, in the Controlled Area Access Building, and on heavy equipment used at the Area 5 SWDS. Under no circumstances will Area 5 SWDS personnel attempt to extinguish a large fire without instructions from the NNSS Fire Department.

The fire station serving the Area 5 SWDS is located in Area 23 (Mercury) approximately 16 mi away and operates 24 hours per day, 7 days a week. In addition, another fire station is located in Area 6, approximately 13 mi away and operates during normal working hours.

## b. Medical Emergency

Employees are trained in first aid and CPR (see Table 2). Emergency medical services are located in Area 6, approximately 13 mi away, and are available during working hours. Additional emergency medical services are located in Area 23 (Mercury), approximately 16 mi away, and are also available during working hours. Area 5 SWDS personnel may contact medical services by calling 702-295-3490 or 911 or by using a "Mayday" signal on the NNSS radio communication system. Additional emergency services are available 24 hours a day through the NNSS Fire Department. Area 5 SWDS personnel always have an NNSS radio and cell phone with them.

#### c. Inclement Weather and Natural Events

The Area 5 SWDS is susceptible to a variety of severe weather events (e.g., damaging winds, lightning, earthquakes, and floods) with the potential to damage property and equipment and to adversely affect operations. Due to the location of the Area 5 SWDS and the nature of the work, extreme high and low temperatures are expected. The Area 5 SWDS is not operated in heavy rain or other severe storms.

The weather forecast is reported at each Plan of the Day meeting at the Area 5 SWDS. Current and forecast weather conditions are verified and monitored with the Air Resources Laboratory/Special Operations and Research Division. Area 5 SWDS personnel are trained to identify hazardous weather conditions per applicable M&O Contractor procedures and are instructed to pay attention to early signs of thunderstorms (e.g., high winds, dark clouds, rain, and distant thunder or lightning). Personnel also receive alerts from the NNSS Operations Command Center over the NNSS radio communication system about inclement weather.

In the event of inclement weather that could adversely impact operations at the Area 5 SWDS, personnel are directed to take shelter in a vehicle or building. When lightning is detected within 10 mi of the Area 5 RWMS, a radio announcement is made, and personnel are directed to terminate all outside work, place work in a safe configuration, and seek shelter either in a vehicle or in a building. Another

announcement is made within 30 minutes to communicate whether the lightning alert and sheltering has been extended or lifted.

The Area 5 SWDS is protected from run-on water through flood protection structures and soil berms. However, rainfall directly on the disposal cells may result in muddy conditions that require that the Area 5 SWDS be closed for a short period of time until additional native soil is added to muddy areas to provide a workable surface.

#### d. Equipment Failure

Heavy equipment at the Area 5 SWDS is maintained to prevent failure. However, there may be circumstances where equipment failure may occur, and the equipment cannot be repaired in a timely manner. Backup equipment will be obtained from other NNSS operations, as needed, while the equipment dedicated to the Area 5 SWDS is being repaired.

#### e. Access Controls

The Area 5 SWDS is not a publicly accessible disposal site, and waste disposal is subject to prior scheduling and approval. The Area 5 SWDS is normally open only during the day shift of the normal work week (Monday through Thursday, excluding holidays); however, it is possible to make special arrangements for nonscheduled workdays.

Access is controlled through the Area 5 RWMS main office. The barrier to the disposal cells remains locked when the Area 5 RWMS is not in operation. The Area 5 RWMS is protected from intrusion by a secured entry gate and a fence surrounding the site.

#### f. Additional Information

The M&O Contractor plan PLN-1022, *Health and Safety Plan for the Area 3 and 5 Radioactive Waste Management Facilities*, includes additional details on the hazards, training, personal protective equipment, medical surveillance, monitoring, site control, decontamination, emergency response, confined space, and spill containment for all operations at the Area 5 RWMS, including the Area 5 SWDS.

The M&O Contractor plan EPIP-RWMC.001, *Radioactive Waste Management Complex Emergency Response Actions*, includes additional guidance for responding to incidents, implementing protective actions, and making prompt notifications to ensure that Area 5 SWDS personnel are prepared to respond to incidents at the Area 5 RWMS to ensure their health and safety.

These M&O Contractor plans are maintained at the Area 5 RWMS and are available upon request.

## g. Incident Reporting

Incidents that may endanger human health or the environment, including any noncompliance, imminent or existing hazard from a release of waste or hazardous constituents, or fire or explosion, will be reported to NDEP by telephone within 24 hours from the time the incident becomes known. A written report shall be submitted within 15 days of the incident and shall include the following:

- Name and title of person making the report
- Date, time, and type of incident
- Type and quantity of material(s) involved
- Description of the occurrence and its cause
- Extent of injuries, if any
- Assessment of actual or potential hazards to the environment and human health outside the facility, where applicable
- Estimated quantity and disposition of recovered material that resulted from the incident
- Actions taken in response to the incident

## xi. Groundwater/Methane Monitoring (NAC 444.683/NAC 444.7483/NAC 444.667)

## a. Vadose Zone Monitoring in lieu of Groundwater Monitoring

According to NAC 444.741, "Plan for monitoring water; suspension of monitoring requirements," a plan for groundwater monitoring for a Class III site will include "monitoring of the unsaturated zone or groundwater depending on local conditions." NAC 444.741(3) states that monitoring requirements may be suspended if "there is no reasonable potential for migration of pollutants or contaminants from the site to waters of the State." NAC 444.7481, "Suspension and continuation of monitoring requirements," also states that groundwater monitoring may be suspended if "there is no potential for migration of hazardous constituents to the uppermost aquifer."

The following information demonstrates that groundwater monitoring at the Area 5 SWDS is not necessary for protection of the groundwater because there is no pathway to groundwater from disposed waste. Monitoring includes vadose zone monitoring (i.e., monitoring of the unsaturated zone) rather than groundwater monitoring.

The Area 5 RWMS is located in Frenchman Flat, 65 mi northwest of the Las Vegas metropolitan area. The region is one of the least populous regions in the U.S. due to lack of water resources. Ecologic and hydrogeologic conditions have been previously summarized for the NNSS (DOE 1997, Shott et al. 1998, Ostler et al. 2000, and Bechtel Nevada 2006) and the Area 5 RWMS (Reynolds Electrical and Engineering Company, Inc. 1993 and 1994, Istok et al. 1994, and Blout et al. 1995). Frenchman Flat is a closed basin typical of the Basin and Range Province, filled with 1,200 to 1,500 feet of alluvial sediments. Permanent surface waters do not occur within the basin.

Frenchman Flat receives an average of 4.7 inches of precipitation per year, and potential evapotranspiration is approximately 59 inches per year. Most of the precipitation falls during two seasons. The larger amount of precipitation occurs in the winter, and a smaller amount of precipitation occurs in the summer months.

The uppermost aquifer is in alluvial sediment approximately 774 feet below the Area 5 RWMS. The water table in the uppermost aquifer is nearly flat. The ten-year average groundwater elevation measured at the monitoring wells near the Area 5 RWMS is 2,407 feet above mean sea level. Groundwater elevations are used to calculate the magnitude and direction of the aquifer hydraulic gradient. Calculated flow velocities are less than 0.33 feet per year (MSTS 2023a).

Site characterization studies indicate that precipitation does not infiltrate below the depth of the plant root zone, and recharge of the aquifer is negligible under current climatic conditions. A large accumulation of chloride is observed at approximately 8.2 feet in the alluvial sediments, indicating the depth of infiltrating precipitation. The amount of accumulated chloride indicates that recharge to the aquifer ceased 10,000 to 15,000 years ago (Tyler et al. 1996 and Scanlon et al. 2003). Weighing lysimeters, in operation since 1994, have not detected drainage below a depth of 6.6 feet on the vegetated lysimeter. Water potential measurements indicate that vadose zone pore water flows upwards in the upper 115 feet of the vadose zone (Shott et al. 1998).

Climate and vegetation strongly control the movement of water in the upper 6 feet of the alluvium. Except for periods following precipitation events, water content in this near-surface region is low. Below the near-surface region, relatively steady upward movement of water is occurring. In this region of slow upward water movement, stable isotope compositions of soil pore water show that evaporation is the dominant process (Tyler et al. 1996). This region extends from approximately 6 to 130 feet. Below this region, water potential measurements indicate the existence of a static region located between approximately 130 and 295 feet below ground surface (Shott et al. 1998). In this static region, essentially no vertical liquid flow is occurring. Below this static region, flow is steady and downward due to gravity. If contaminants were to migrate below the static region, movement to the groundwater would be extremely slow due to the low water content of the alluvium. Conservative estimates from beneath the static region to the groundwater exceed 50,000 years (Shott et al. 1998).

Water content and water depth profiles are measured with time domain reflectometry (TDR) and heat dissipation probes in the upper 6 feet of several closure covers at the Area 5 RWMS to detect the percolation depth of surface-infiltrated precipitation above the waste. All data collected show that precipitation does not infiltrate to the deepest probe at any monitoring station (MSTS 2023b).

In summary, the extensive evapotranspiration studies and monitoring of the unsaturated zone show that there is no viable pathway to groundwater from the Area 5 RWMS, including the Area 5 SWDS. In addition, four groundwater monitoring wells located south, southeast, northeast, and northwest of the Area 5 RWMS have been monitored for over 30 years for compliance with RCRA Permit NEV HW0101, and the data support the conclusion that there is no migration of waste and no impact to groundwater from the Area 5 RWMS (MSTS 2023a).

Vadose zone monitoring for the Area 5 SWDS includes collection of data at the Area 5 Weighing Lysimeter Facility and at TDR and heat dissipation probes buried in final closure covers on various disposal cells at the Area 5 RWMS.

The Area 5 Weighing Lysimeter Facility, located near the southern boundary of the Area 5 RWMS, is operated to monitor hourly changes in weight of the soil. These data indicate changing conditions (i.e., increased precipitation or decreased evapotranspiration) that may potentially allow precipitation to percolate through closure covers towards buried waste.

TDR and heat dissipation probes buried in the upper 6 feet of a representative number of closure covers at the Area 5 RWMS are operated to measure volumetric water content. The probes are arranged vertically at each location at depths ranging from 0.5 to 6 feet at 0.5- or 1-foot intervals. Volumetric water content greater than 30 percent for two consecutive years at the deepest TDR probe at any location would require consultation with NDEP and expanded soil moisture monitoring beneath the waste zone.

## b. Methane Monitoring

Waste accepted for disposal at the Area 5 SWDS is not expected to generate methane gas. Based on the physical and chemical composition of buried waste and low annual rainfall at the Area 5 SWDS, the generation and accumulation of explosive or toxic gases is considered minimal or nonexistent. Therefore, methane and explosive gas monitoring is not necessary.

#### xii. Leachate Management (NAC 444.684)

There is no leachate collection system at Area 5 SWDS.

## xiii. Surface Water Management Requirements (Drainage from Active Areas) (NAC 444.6885)

The Area 5 SWDS is not operated in heavy rain or other severe storms. It is protected from flooding from upstream watersheds by two engineered flood control channels (west and east of the Area 5 RMWS) and berms. The berms extend along the western, northern, and eastern sides of the Area 5 RMWS. The channels are designed to divert the peak flow from a 25-year, 24-hour storm event. Rain falling directly on the Area 5 SWDS may result in localized muddy conditions, which may require the Area 5 SWDS to be closed for a short period of time until additional native soil is added to muddy areas to provide a workable surface.

## xiv. Closure/Post-Closure Procedures/Requirements with Financial Assurance (NAC 444.6895)

#### a. Closure Plan

NDEP will be notified in writing of the intent to close a disposal cell in the Area 5 SWDS at least 15 days before beginning closure activities. Closure activities will commence within 30 days of any disposal cell receiving its final shipment of waste and will be completed within 180 days after beginning closure.

Closure of Area 5 SWDS disposal cells will include construction of engineered soil covers at least 8.2 feet thick over each disposal cell and seeding the soil covers with a mixture of native plant species. The soil covers will be designed to minimize infiltration and erosion, provide long-term stability, and protect the groundwater through evapotranspiration. The design and construction of the soil covers will meet the requirements of NAC 444.6891, "Requirements for design and construction of system for final cover."

The closure plan for each Area 5 SWDS disposal cell will address all steps that will be taken to complete closure and will include the closure cover specifications, the total volume of waste placed in the disposal cell, decommissioning of any equipment or structures, and the installation of additional features, as required.

After closure is complete, NDEP will be notified that a certification, signed by an independent licensed professional engineer and approved by NDEP verifying that closure has been completed in accordance with the plan for closure has been placed in the operating record.

#### b. Post-Closure Plan

This section details the post-closure plan for the closed disposal cells in the Area 5 SWDS (Pit 6, Pit 7, and Cell 19). Pit 6 and Pit 7 were closed in 2011. Closure of Cell 19 was completed in 2022. The post-closure program will be conducted for a period of 30 years after closure. Table 4 summarizes the post-closure requirements for the Area 5 SWDS.

Visual inspections of the closure covers are conducted quarterly for cracks, settling, subsidence, and erosion. Cracks or settling imperfections greater than 6 inches deep that extend 3 feet or more on the closure covers (through animal burrows, erosion, or subsidence) are reported to NDEP within 14 days and repaired within 60 days of discovery. Evidence of human intrusion into the closure covers is reported to NDEP immediately upon discovery. Repair work will preserve the "as built" closure cover design. If repairs require modification of the closure cover design, a formal design modification request will be presented to NDEP prior to making the design modification.

Two subsidence monuments are installed on the closure covers over each closed disposal cell. The subsidence monuments are land surveyed on a biennial basis (every two years) to determine if overall subsidence has occurred on the closure covers. Significant subsidence is reported to NDEP within 14 days and repaired within 60 days of discovery.

Annual assessments are conducted to evaluate the success of the establishment of vegetation on the closure covers. The objective of vegetation monitoring for the first five to ten years after seeding is to determine if seeds have germinated and plants are becoming established to minimize moisture near buried waste through evapotranspiration.

During vegetation assessments, plant density (i.e., number of plants per square meter) and plant cover (i.e., percentage of an area that is covered by plant species as opposed to rock, bare ground, or litter) on the closure covers are measured and compared to a reference area located on the NNSS within 1 mi outside the Area 5 RWMS boundary.

Success of revegetation is determined by density and plant cover of 60 percent found on the reference area and sufficient plant cover to evapotranspire moisture out of the closure covers to prevent infiltration towards buried waste. Plant density and plant cover are measured to determine if the vegetation is approaching or meeting expectations to achieve the proposed success standards or if remedial actions are required. If the density and plant cover do not appear adequate, remedial actions such as re-seeding or planting of outplants may be required.

As stated in NAC 444.7481, "Suspension and continuation of monitoring requirements," groundwater monitoring may be suspended if "there is no potential for migration of hazardous constituents to the uppermost aquifer." As demonstrated in Section 2, Subsection xi, "Groundwater/Methane Monitoring," of this operating plan, there is no viable pathway to groundwater from the Area 5 SWDS. Therefore, groundwater monitoring is not conducted for the Area 5 SWDS. Post-closure vadose zone monitoring is

conducted and includes collection of data at the Area 5 Weighing Lysimeter Facility and at TDR and heat dissipation probes buried in final closure covers on various disposal cells at the Area 5 RWMS.

The Area 5 Weighing Lysimeter Facility, located near the southern boundary of the Area 5 RWMS, is operated to monitor hourly changes in weight of the soil. These data indicate changing conditions (i.e., increased precipitation or decreased evapotranspiration) that may potentially allow precipitation to percolate through closure covers towards buried waste.

TDR and heat dissipation probes buried in the upper 6 feet of a representative number of closure covers at the Area 5 RWMS are operated to measure volumetric water content. The probes are arranged vertically at each location at depths ranging from 0.5 to 6 feet at 0.5- or 1-foot intervals. Volumetric water content greater than 30 percent for two consecutive years at the deepest TDR probe at any location would require consultation with NDEP and expanded soil moisture monitoring beneath the waste zone.

Post-closure monitoring of gas is not performed. Waste accepted for disposal at the Area 5 SWDS is not expected to generate methane gas. Based on the physical and chemical composition of buried waste and low annual rainfall at the Area 5 SWDS, the generation and accumulation of explosive or toxic gases is considered minimal or nonexistent.

Use of the Area 5 SWDS during and after the post-closure period will not change and will not disturb the integrity of the closed disposal cells. DOE assumed permanent custody and accountability of the Area 5 RWMS in 2009, and the NNSA/NFO institutional control policy provides for continuity of restricted access and continued management of the NNSS in perpetuity.

An annual report of the previous calendar year's post-closure monitoring activities is submitted to NDEP by May 31 of each year.

**Table 4. Post-Closure Requirements** 

Activity	Requirement	Compliance Criteria and Actions
Visual Inspections	Quarterly visual inspections of the closure covers for cracks, settling, subsidence, or erosion	Cracks or settling imperfections greater than 6 inches deep that extend 3 feet or more on the closure covers are reported to NDEP within 14 days and repaired within 60 days of discovery. Evidence of human intrusion into the cover is reported to NDEP immediately upon discovery.
Subsidence Surveys	Biennial land surveys of subsidence monuments (every two years)	Significant subsidence is reported to NDEP within 14 days and repaired within 60 days of discovery.
Vegetation Assessments	Annual assessments of the vegetation	For the first five to ten years, seeds have germinated and plants are becoming established on the site.
		Plant cover and plant density are approaching 60 percent of that of a reference area located on the NNSS within 1 mile of the Area 5 RWMS boundary.
		Recommendations made by ecological specialist or biologist are implemented.
Vadose Zone Monitoring	Operation of the Area 5 Weighing Lysimeter Facility and TDR and heat dissipation probes buried	Volumetric water content greater than 30 percent for two consecutive years at the deepest TDR probe

Activity	Requirement	Compliance Criteria and Actions
	in a representative number of closure covers at the Area 5 RWMS	location requires consultation with NDEP and expanded soil moisture monitoring beneath the waste zone.

#### c. Financial Assurance

NAC 444.685, "Financial assurance: Compliance mandatory; exemptions; waiver," exempts entities of the federal government from the financial assurance requirements outlined in the State of Nevada solid waste disposal regulations.

#### xv. Additional Requirements for Operating

No additional requirements for operating are identified.

## xvi. Miscellaneous Requirements (NAC 444.747)

#### a. Scavenging

Scavenging and salvaging are not permitted at the Area 5 SWDS.

#### b. Inspections

Refer to Section 2, Subsection ix, "Inspections and Operating Records."

#### c. Weighing and Measuring Waste

Refer to Section 2, Subsection ix, "Inspections and Operating Records."

## d. Annual Report

Refer to Section 2, Subsection ix, "Inspections and Operating Records."

## e. Approval by Solid Waste Management Authority

Refer to Section 2, Subsection ii, "Location Requirements."

#### f. Operating records

Refer to Section 2, Subsection ix, "Inspections and Operating Records."

#### g. Financial Assurance

Refer to Section 2, Subsection xiv, "Closure/Post-Closure Procedures/Requirements with Financial Assurance."

#### h. Closure and Post-Closure Care

Refer to Section 2, Subsection xiv, "Closure/Post-Closure Procedures/Requirements with Financial Assurance."

#### i. Site Location

Refer to Section 2, Subsection ii, "Location Requirements."

#### i. Waste Characterization

Refer to Section 2, Subsection vi, "Waste Characterization and Acceptance Criteria."

#### k. Groundwater Monitoring

Refer to Section 2, Subsection xi, "Groundwater/Methane Monitoring."

#### I. Changes to Documents

Changes requiring approval will be submitted to NDEP.

m. Alternative Schedule for Recordkeeping and Notification

No alternative schedule is requested for recordkeeping or notification requirements.

#### xvii. Additional Site-Specific Requirements

No additional site-specific requirements are identified.

## 3. REFERENCES

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