

 SOLID WASTE DISPOSAL SITE PERMIT CLASS III	OWNER U.S DEPARTMENT OF ENERGY NEVADA FIELD OFFICE	PERMIT # SW 13 097 03 REVISION 13
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1. FACILITY SUMMARY

The Area 9 Class III Solid Waste Disposal Site (SWDS) is in the northeast corner of the Nevada National Security Site (NNSS) in a subsidence crater created by two underground nuclear events. The facility originally opened in 1971 for the disposal of rubbish, refuse, pathological waste, asbestos-containing material, and industrial solid waste. A Notice of Intent to operate as a Class II site was submitted by DOE on January 26, 1994 and was acknowledged by the State of Nevada on February 8, 1994. The disposal site operated as a Class II SWDS until it closed for retrofit as a Class III SWDS on October 5, 1995. The retrofit consisted of the installation of a minimum four-foot compacted soil layer to segregate the different waste types and function as a liner to inhibit leachate and water flow into the lower waste zone. Five neutron monitoring tubes were installed in this layer to monitor possible leachate production and water activity. The site reopened in January 1996 as a Class III SWDS for the disposal of industrial solid waste and other inert waste.

1.1 GENERAL DESCRIPTION

This Permit authorizes the operation of a Class III disposal site, consisting of one industrial solid waste landfill unit, contiguous land, structures, other appurtenances and improvements for the disposal of industrial waste as approved by the Solid Waste Management Authority, hereby referred to as the Nevada Division of Environmental Protection (NDEP). An updated application with a cover letter dated December 16, 2022, was received on January 4, 2023, and confirms that a compacted cover will be placed over each lift during ongoing operations, with a final cover to be installed at time of closure. The Owner and/or Operator will perform vadose zone monitoring, closure, and post closure care in accordance with this Permit.

1.2 OWNER/OPERATOR

Owner: U.S. Department of Energy
National Nuclear Security Administration
Nevada Field Office
P.O. Box 98518
Las Vegas, NV 89193-8518

Authorized Agent: David R. Bowman, PhD
Manager
NNSA/NFO

Operator: Mission Support and Test Services, LLC
P.O. Box 98521
Las Vegas, Nevada 89193-8521

Authorized Agent: Mark Krauss
Senior Director
Mission Support and Test Services, LLC

1.3 FACILITY LOCATION

Nevada National Security Site – Area 9, NNSS, Nye County

1.4 **FACILITY DESIGN**

Permitted Design Summary

Class III	Revision 13
Disposal Area (acres)	28
Maximum Elevation (ft amsl)	4,260
Minimum Elevation (ft amsl)	4,220
Disposal Capacity (yds ³)	446,206

ft amsl = feet above mean sea level

yds³ = cubic yards

2. **GENERAL PERMIT CONDITIONS**

2.1 **DEFINITIONS**

Unless the context otherwise requires, the definitions used in this Permit have the meanings ascribed to them in Nevada Administrative Code (NAC) 444.5701 to 444.631, 444.9435, Nevada Revised Statute (NRS) 618.750, NRS 444.495(2).

"Asbestos" means asbestiform varieties of Chrysotile, Crocidolite, Amosite, Anthophyllite, Tremolite, or Actinolite.

"Industrial Solid Waste" means solid waste derived from industrial or manufacturing processes.

"Landfill volume" means the quantity of space contained above the bottom liner of the Class III landfill and including the final cover of a landfill design.

"Landfill disposal capacity" means the quantity of solid waste, by volume, that can be placed in a landfill, given its landfill volume and plan of operations.

"Operator" means the person responsible for the overall operation of a disposal site or any part of that site.

"Owner" means the person who owns a disposal site or any part of that site.

"Polychlorinated biphenyl" PCB and PCBs mean any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. Refer to 40 CFR § 761.1(b) for applicable concentrations of PCBs. PCB and PCBs as contained in PCB items are defined in 40 CFR § 761.3. For any purposes under this part, inadvertently generated non-Aroclor PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5.

"Solid Waste Management Authority" means in all other areas of the state and pursuant to NRS 704.7318, the Division of Environmental Protection of the State of Nevada's Department of Conservation and Natural Resources.

2.2 **PERMIT ACTIONS (NAC 444.643)**

This Permit is based upon information available to the NDEP and information submitted in the Permit application. This Permit may be modified by the NDEP, for cause, in accordance with NAC 444.643 or if there is a change in the statutes or regulations upon which the issuance of the Permit is based, or if a

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modification is otherwise necessary to protect public health, safety and the environment. This Permit may be revoked or suspended if written notice is given by the NDEP and the disposal site does not remain in compliance with the applicable statutes and regulations. The filing of a request by the Owner and/or Operator for a Permit modification or termination, or a notification of planned changes or anticipated noncompliance, or termination of activities authorized in the Permit does not stay any Permit condition. The Owner and/or Operator shall inform the NDEP of any deviation from or change in the operations as presented in the application, which may affect the Owner and/or Operator's ability to comply with applicable regulations or conditions of this Permit. This Permit may be transferred to a subsequent owner or operator only if the NDEP approves the transfer based on documentation of financial responsibility provided by the new owner or operator.

2.3 AVAILABILITY OF PERMIT DOCUMENTS

The Owner and/or Operator shall keep at the NNSS, a complete copy of this Permit and incorporated documents, as identified herein.

2.4 COMPLIANCE WITH STATUTES AND REGULATIONS

The Owner and/or Operator shall comply with NRS 444.440 through 444.620, and NAC 444.570 through 444.7499, as applicable.

2.5 DUTY TO PROVIDE INFORMATION

The Owner and/or Operator shall furnish to the NDEP, within a reasonable time, any relevant information which the NDEP may request to determine compliance with this Permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit. The Owner and/or Operator shall also furnish to the NDEP, upon request, copies of records required to be kept by this Permit.


2.6 INCIDENT REPORTING

The Owner and/or Operator shall report incidents, including but not limited to any noncompliance, imminent or existing hazard from a release of waste or hazardous constituents, or from a fire or explosion at the facility, which may endanger human health or the environment to the NDEP as provided in Section 11.0 of the Operating Plan. Such information shall be reported by telephone to 888-331-6337 within twenty-four (24) hours from the time the Owner and/or Operator becomes aware of the circumstances. A written report shall be submitted within 15 days of the incident and shall include the following:

- i. Name and title of person making report;
- ii. Date, time, and type of incident;
- iii. Name and quantity of material(s) involved;
- iv. A complete description of the occurrence and its cause;
- v. The extent of injuries, if any;
- vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable;
- vii. Estimated quantity and disposition of recovered material that resulted from the incident; and
- viii. Actions taken by the Owner and/or Operator in response to the incident.

2.7 REPORTING ANTICIPATED NON-COMPLIANCE

The Owner and/or Operator shall give advance notice to the NDEP of any planned changes in the permitted facility or activity that may result in noncompliance with Permit requirements.

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2.8 **INSPECTION AND ENTRY**

The Owner and/or Operator shall allow the NDEP, upon the presentation of credentials or other documents as may be required by law to:

- i. Enter at reasonable times upon the Owner and/or Operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- iv. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized, any substances or parameters at any location subject to the Permit.

3. **PERMIT DOCUMENTS**

The following documents, as submitted by the Owner and/or Operator and approved by the NDEP also describe and/or restrict the operation of this disposal site:

- i. Permit Application (January 4, 2023)
- ii. Operating Plan for Area 9 Class III Solid Waste Disposal Site Permit No. SW 13 097 03

4. **WASTE CHARACTERIZATION AND ACCEPTANCE CRITERIA**


Section 7 in the Operating Plan.

4.1 **SOLID WASTES PERMITTED FOR DISPOSAL**

1. Industrial Waste
2. Construction Waste
3. Regulated Asbestos Containing Material (RACM)
4. Polychlorinated biphenyl (PCB)
 - a. PCB Articles
 - i. PGB Small Capacitors 40 CFR § 761.60(b)(2)(ii)
 - ii. PCB Hydraulic Machines, drained (<1000 ppm PCB) 40 CFR § 761.60(b)(3)(i)(B)
 - iii. PCB Hydraulic Machines, flushed (>1000 ppm PCB) 40 CFR § 761.60(b)(3)(i)(B)
 - iv. PCB-Contaminated Electrical Equipment (>50 ppm but <500 ppm PCB) 40 CFR § 761.60(b)(4)
 - v. Other PCB Article <500 ppm PCB 40 CFR § 761.60(b)(6)(ii)(A)(2)
 - vi. PCB light ballast with PCBs in nonleaking capacitor 40 CFR § 761.50(b)(2)(i)
 - vii. Empty PCB Containers (<500 ppm) 40 CFR § 761.60 (c)(2)
 - b. PCB Bulk Product Waste
 - i. 40 CFR § 761.62(b)(1)(i)
 - ii. 40 CFR § 761.62(b)(1)(ii)
5. Other waste(s) on a case-by-case basis, with concurrence from the NDEP

4.2 **PROHIBITED SOLID WASTES**

1. Liquid waste as defined by NAC 444.692(4)
2. Hazardous waste, as defined by NAC 444.580 & State and Federal Regulations
3. Household waste as defined by NAC 444.581
4. Medical Waste as defined by NAC 444.589
5. Garbage as defined by NAC 444.578
6. Pathological waste as defined by NAC 444.600

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7. PCBs

- a. Liquid PCBs
- b. PCB transformers with PCB concentrations greater than 500 ppm
- c. PCB articles with PCB concentrations greater than 500 ppm
- d. Unflushed PCB hydraulic machines with PCB concentrations greater than 1000 ppm
- e. Empty PCB containers with PCB concentrations greater than 500 ppm
- f. Large capacitors with PCB concentrations greater than 500 ppm

8. Other prohibited wastes as stated in Section 7.6 of the Operating Plan

5. **RECORDKEEPING**


The Owner and/or Operator shall maintain records at the NNSS as described in Section 10.3 of the Operating Plan. The owner or operator shall notify the NDEP when documentation listed in Section 5.1 of this permit has been placed in or added to the operating records.

5.1 **CLASS III FACILITY RECORDS:**

1. Plans for closure and post closure care and any monitoring, testing or analytical data required pursuant to NAC 444.6891 to 444.6896, inclusive; and
2. How the site conforms to the restrictions on location set forth in NAC 444.735; and
3. Any plan to characterize solid waste required pursuant to NAC 444.737; and
4. Any demonstration, certification, finding, monitoring, testing or analytical data from the program for monitoring ground water required pursuant to NAC 444.7481 to 444.7499, inclusive; and
5. The owner or operator shall promptly notify the NDEP after the owner or operator has placed the information in the operating record of its facility pursuant to this subsection. The information must be furnished upon request, or be made available for inspection by the NDEP at any reasonable time.

6. **REPORTING**

1. The Owner and/or Operator shall submit annually to the NDEP a report of the solid waste received at the site. The report is due 30 days following the end of each calendar year and should include:
 - i. All off-normal conditions experienced during the prior calendar year.
 - ii. The weight and volume of waste disposed of in both annual and quarterly totals.
 - iii. All exceptions to the Waste Acceptance Criteria (as found in the Permit Application).
2. The Owner and/or Operator shall submit online annually the weight and volume of waste disposed of the solid waste received at the site at <https://nvwastemanagementreports.ndep.nv.gov/submitdisposal/>. The online reporting is due 30 days following the end of each calendar year.
3. The Owner and/or Operator shall by December 31, 2023 and at least once every five years thereafter until the site is closed:
 - i. Indicate the remaining volume and disposal capacity of the site;
 - ii. Indicate the volume used and waste disposed of since the original report of design; and
 - iii. Calculate the remaining life of the site, in years.
4. The Owner and/or Operator shall submit biennially to the NDEP a Neutron Monitoring Report. The report must be submitted by the last Friday of the second quarter of the calendar year.
5. All reports, notifications, or other submissions which are required by this Permit must be submitted by the specified due date to:

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Bureau of Federal Facilities
Nevada Division of Environmental Protection
375 East Warm Springs Road,
Suite 200
Las Vegas, NV 89119

7. FINANCIAL ASSURANCE REPORTING

NAC Code 444.685 exempts entities of the federal government from the financial assurance requirements outlined in the State of Nevada solid waste disposal regulations.

8. NOTIFICATION OF NEW CELL CONSTRUCTION

In accordance with NRS 444.556 and Section 6.5, above, the Owner and/or Operator shall notify the NDEP in writing within 10 days following the commencement of construction of a new cell.

9. GROUNDWATER MONITORING


In order to comply with the requirements of NAC 444.741, the vadose zone (i.e., the unsaturated zone) is monitored via neutron monitoring tubes. The biennial report submitted to NDEP will be titled Neutron Monitoring Report.

A 1.2 m (4 ft) compacted soil barrier was installed in late 1995 before opening the site for disposal of Class III waste. The purpose of the soil layer is to segregate the two different portions of the disposal site and inhibit leachate movement through the barrier, thus acting as a liner for the permissible waste disposed of in the Class III landfill. In 1995, a monitoring system designed to detect leachate and moisture mobility through the 1.2 m layer of compacted soil, as well as monitor changes in the industrial solid waste, was installed.

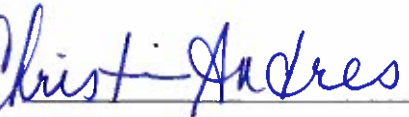
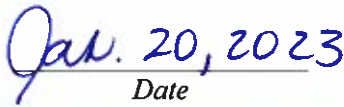
As an indicator of the amount of water and leachate entering into the soil barrier, four neutron monitoring tubes were placed three feet into the layer, and one control tube was placed outside of the landfill. A neutron soil moisture gauge is used to monitor changes in the soil moisture content within the 1.2 m (4 ft) engineered barrier. All data is reported as percent moisture content. The action level requiring NDEP notification is the midpoint between the existing baseline data (representing dry conditions) and saturated conditions measured at a point approximately 0.3 m (1 ft) above the bottom of the monitoring tube. The NDEP will be notified of any action level reached or exceeded within 21 days of the confirmation.

Initial neutron logging started in January 1996 and annual readings were performed until 2017 to determine if water has entered the barrier. In 2017, the minimum monitoring frequency of the neutron tubes was changed from annual to biennial. Monitoring occurs anytime within a two-year timeframe. Additional monitoring will be conducted within three months following a 24-hour rain event that exceeds 1.5 in. as measured by the weather monitoring station A10AA or next nearest station if A10AA is not available.

Logging will continue biennially throughout the active life of the disposal site. Only changes within the 1.2-meter layer of compacted soil will trigger a notification to NDEP. Continued use of the system will be addressed in the closure and post-closure plans for the site.

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10. **AUTHORIZATION**

<i>Signature of Approving Officer</i>	<i>Name and Title of Approving Officer</i>	<i>Date of Issuance</i>
	Christine D. Andres, Chief Bureau of Federal Facilities	 <i>Date</i>

