

1. FACILITY SUMMARY

The Area 5 Class III Solid Waste Disposal Site (SWDS) is located at the eastern edge of Frenchman Flat within the Area 5 Radiological Waste Management Site at the Nevada National Security Site, Nye County, Nevada. The SWDS includes three active landfill cells (Cells 22, 27, and 28).

1.1 GENERAL DESCRIPTION

The Permit authorizes the operation of a Class III disposal site, consisting of industrial solid waste landfill Cell(s), contiguous land, structures, and other appurtenances and improvements for the disposal of industrial waste as approved by the NDEP, hereby referred to as the Nevada Division of Environmental Protection (NDEP). An application with a cover letter dated April 08, 2024, was received on April 09, 2024, and provides that an interim cover will be installed with ongoing operations, with a final cover to be installed at time of closure. The Owner and/or Operator will perform closure, and post closure care in accordance with this Permit.

1.2 OWNER AND/OR 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: Betty L. Huck
Manager
NNSA/NFO

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

Authorized Agent: John S. Contardi
Senior Director
Mission Support and Test Services, LLC


1.3 FACILITY LOCATION

Nevada National Security Site – Area 5, NNSS, Nye County

1.4 FACILITY DESIGN

Permitted Design Summary

Cell	Dimensions (ft)	Design Capacity (yds ³)	Status
*Pit 6	623 x 98 x 22	29,288	Closed
*Pit 7	249 x 36 x 22	6,701	Closed

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*19	150 x 675 x 21	51,767	Closed
22	790 x 280 x 20	162,852	Active
27	470 x 160 x 12	33,422	Active
28	470 x 160 x 12	33,422	Active

ft = feet

yds³ = cubic yards

* Indicates Cell is no longer active and has been updated to a closed disposal cell with post-closure requirements

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 NAC 444.5701 to 444.631, 444.9435, NRS 618.750, and NRS 444.95(2)

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

“Classified waste” means waste or matter 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.”

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

“Landfill volume” means the quantity of space contained above the bottom liner 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.

“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 [§ 761.1\(b\)](#) for applicable concentrations of PCBs. PCB and PCBs as contained in PCB items are defined in [§ 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.

“NDEP” means in all other areas of the state and pursuant to NRS 704.7318, the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

2.2 PERMIT ACTIONS (NAC 444.643)

This Permit is based upon the information submitted in the Permit Application, and as approved by the NDEP. 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 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 and/or Operator only if the NDEP approves the transfer based on documentation of financial responsibility provided by the new Owner and/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, NAC 444.570 through 444.7499, and 444.965 through 444.976, 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 to the NDEP as provided in the Facility Operating Plan. In addition, the Owner and/or Operator shall report 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. 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.

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.

2.9 CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL (NAC 444.645)

The Owner and/or Operator shall:

- i. Develop and carry out a program for quality assurance and quality control for the construction of a new cell.
- ii. Submit a summary of this program to the NDEP before commencement of construction of the disposal site.

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 (March, 2024)
- ii. Facility Operating Plan for Area 5 Asbestos Solid Waste Disposal Site Class III Solid Waste Disposal Site Permit No. SW 532 (November 2023)
- iii. Design Report for Area 5 Asbestos Solid Waste Disposal Site Class III Solid Waste Disposal Site Permit No. SW 532 (November 2023)

4. WASTE ACCEPTANCE CRITERIA

The governing document for the Waste Acceptance Criteria is the Facility Operating Plan for Area 5 Asbestos Solid Waste Disposal Site Class III Solid Waste Disposal Site Permit No. SW 532, Section 2, Subsection vi.

4.1 SOLID WASTES PERMITTED FOR DISPOSAL

1. Regulated Asbestos Low-Level Waste (ALLW)
 - i. Friable asbestos material
 - ii. Category I nonfriable asbestos-containing material that has become friable
 - iii. Category I nonfriable asbestos-containing material that has been subjected to sanding, grinding, cutting, or abrading
 - iv. 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

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expected to act on the material in the course of demolition or renovation operations regulated by 40 CFR 61, Subpart M

2. Low Level Waste (LLW) that meets the waste acceptance criteria of Section 2.vi of Facility Operating Plan.
3. PCBs
 - i. PCB small capacitors
 - ii. PCB hydraulic machines, drained (<1,000 parts per million [ppm] PCBs)
 - iii. PCB hydraulic machines, flushed (>1,000 ppm PCBs)
 - iv. PCB-contaminated electrical equipment (≥50 ppm but <500 ppm PCBs)
 - v. Other PCB articles with <500 ppm PCBs
 - vi. PCB light ballasts with PCBs in non-leaking capacitors
 - vii. Empty PCB containers with <500 ppm PCBs
 - viii. PCB Bulk product waste >50 ppm that leaches at a rate <10 micrograms of PCBs per liter of water
 - ix. 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
 - x. PCB remediation waste with <50ppm PCBs
4. DOE and DOD classified non-hazardous non-radioactive waste.
5. Other waste 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)
 - i. Except incidental liquids in ALLW packages resulting from wetting with a water and surfactant mixture as required by NAC 444.971(1).
2. Hazardous waste, as defined by NAC 444.580
3. Household Waste as defined by NAC 444.581
4. Garbage as defined by NAC 444.578
5. Medical Waste as defined by NAC 444.589
6. Pathological waste as defined by NAC 444.600
7. PCBs
 - i. Liquid PCB
 - ii. PCB transformers with PCB concentrations greater than 500 ppm
 - iii. PCB articles with PCB concentrations greater than 500 ppm
 - iv. Unflushed PCB hydraulic machines with PCB concentrations greater than 1000 ppm
 - v. Empty PCB containers with PCB concentrations greater than 500 ppm
 - vi. Large capacitors with PCB concentrations greater than 500 ppm

4.3 WASTE SCREENING

The Owner and/or Operator shall carry out a program at the solid waste landfill Cell(s) for detecting and preventing the disposal of prohibited wastes. The program must include, but is not limited to:

1. Physical and/or chemical verification methods of incoming loads and/or at the waste generator site
 - a. Real-Time Radiography (RTR)
 - b. Visual (observing packaging operations)

- c. Sampling and analysis provided by the Generator
 - d. Sampling and analysis overseen by the Radioactive Waste Acceptance Program
 - e. Other verification method recommended by the Waste Acceptance Review Panel (e.g., video, field kits)
 - f. Alternative verification methods as recommended by the Waste Acceptance Review Panel with NDEP consultation.
2. A minimum of 10% of the total containers of waste received per year will be verified (e.g., RTR, visual, or other, etc.).
 3. Records of inspections;
 4. Training persons employed at the Cell(s) to recognize prohibited wastes;
 5. Procedures for handling prohibited wastes found at the site; and
 6. Notification of the NDEP within twenty-four (24) hours if prohibited are discovered at the Cell(s).

5 RECORDKEEPING


The Owner and/or Operator shall maintain records at the NNSS as described in Section 2.ix of the Operating Plan. The Owner and/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. All information contained in the operating records must be furnished upon request to the NDEP or be made available at all reasonable times for inspection by the NDEP.

5.1 CLASS III FACILITY RECORDS

1. Any documentation of cost estimates and financial assurance required pursuant to NAC 444.685. However, NAC 444.685 exempts government entities from the financial assurance requirements listed (see Section 6.1 Financial Assurance Reporting).
2. Plans for closure and post-closure care and any monitoring, testing or analytical data required pursuant to NAC 444.6891 to 444.6896, inclusive.
3. How the site conforms to the restrictions on location set forth in NAC 444.735.
4. Any plan to characterize solid waste required pursuant to NAC 444.737.
5. 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.

6. REPORTING

1. Submit annually to the NDEP a report of the solid waste received at the site. The report must be submitted to the NDEP within 30 days following the end of each calendar year.
2. Submit annually to the NDEP a report of the unsaturated/vadose zone monitoring. The report must be submitted to the NDEP by May 31 of each calendar year.
3. An annual report of the previous calendar year's post-closure monitoring activities will be submitted to the NDEP by May 31 of each year and will, at a minimum, include the following:
 - a. Executive summary;
 - b. A brief narrative and pictures from post-closure inspection activities;
 - c. Copies of the inspection checklists;
 - d. Moisture content profiles through the previous year;
 - e. Any changes noted during post-closure monitoring; and

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- f. Recommendations and conclusions
4. Submit quarterly to the NDEP a report of the ALLW received at the site in accordance with NAC 444.972 and agreements reached with the NDEP. The report must be submitted to the NDEP within 30 days following the end of each calendar quarter.
 5. Submit annually to the NDEP a report of the ALLW received at the site. The report must be submitted to the NDEP within 30 days following the end of each calendar year.
Note: Reports required by Nos. 1 and 5 may be combined into a single report.
 6. The Owner and/or Operator shall submit online (<https://nvwastemanagementreports.ndep.nv.gov/submitdisposal/>) annually the weight and volume of waste received and disposed of at the SDWS. The online reporting is due 30 days following the end of each calendar year.
 7. The Owner and/or Operator shall by December 31, 2026, and at least once every 5 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.

6.1 FINANCIAL ASSURANCE REPORTING.

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

6.2 NOTIFICATION OF NEW CELL CONSTRUCTION

In accordance with NAC 444.733 (NRS 444.556), the Owner and/or Operator shall comply with all the steps listed in NAC 444.733 for a lateral expansion of a Class III site. The Owner and/or Operator shall notify the Division in writing or electronic communication within 10 days following the commencement of construction of a new cell.

6.3 SUBMISSIONS

All reports, notifications, or other submissions which are required by this Permit must be submitted by the specified due date to:

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


7. UNSATURATED/VADOSE ZONE MONITORING

Monitoring of the unsaturated/vadose zone shall be conducted in accordance with NAC 444.741.

8. CLOSURE

The Owner and/or Operator shall:

1. At least 15 days before beginning the closure of a municipal solid waste landfill Cell(s) at a Class III site pursuant to subsection 2, an Owner and/or Operator shall provide notice to the NDEP of the intent to close the Cell(s).


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2. The Owner and/or Operator shall begin activities for the closure of the municipal solid waste landfill Cell(s) no later than 30 days after the date on which the Cell(s) receives the final receipt of wastes or, if the Cell(s) has remaining capacity and there is a reasonable likelihood that the Cell(s) will receive additional wastes, no later than 1 year after the most recent receipt of wastes. Extensions beyond the 1-year deadline may be granted by the NDEP if the Owner and/or Operator demonstrates that the Cell(s) has the capacity to receive additional wastes and the Owner and/or Operator has taken and will continue to take all actions necessary to prevent threats to public health and safety and the environment from the open Cell(s).
3. Except as otherwise provided in subsections 4 and 5, the Owner and/or Operator of a Class III site shall complete activities for the closure of each municipal solid waste landfill Cell(s) at the site in accordance with the plan for closure within 180 days after the beginning the closure. Extensions of the period for closure may be granted by the NDEP if the Owner and/or Operator demonstrates that closure will, of necessity, take longer than 180 days and that the Owner and/or Operator has taken and will continue to take all actions to prevent threats to public health and safety and the environment from the open Cell(s).
4. The Owner and/or Operator of an existing municipal solid waste landfill Cell(s) or lateral expansion at a Class III site which accepts less than 100 tons of solid waste per day shall:
 - a. Comply with the requirements for a final cover set forth in NAC 444.6891; and
 - b. Complete activities for the closure of each municipal solid waste landfill Cell(s) at the site within 180 days after the last receipt of waste.
5. After the closure of each municipal solid waste landfill Cell(s), the Owner and/or Operator of the site shall notify the NDEP that a certification, signed by an independent licensed professional engineer and approved by the NDEP verifying that closure has been completed in accordance with the plan for closure, has been placed in the operating record of the site.

9. POST-CLOSURE

The Owner and/or Operator shall:

1. After the closure of each municipal solid waste landfill Cell(s) of a Class III site, the Owner and/or Operator of the site shall conduct a program for post-closure for that Cell(s). Except as otherwise provided in subsection 2, below, the program must be conducted for 30 years and consist of at least the following:
 - a. The integrity and effectiveness of any final cover must be maintained, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing runoff and runoff from eroding or otherwise damaging the final cover.
 - b. The unsaturated/vadose zone must be monitored in accordance with NAC 444.741, inclusive, and the system for monitoring the unsaturated/vadose zone must be maintained, if applicable.
2. The length of the program for post-closure may be:
 - a. Decreased by the NDEP if the Owner and/or Operator demonstrates that the reduced period is sufficient to protect public health and safety and the environment, and this demonstration is approved by the NDEP; or

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- b. Increased by the NDEP if it determines that the lengthened period is necessary to protect public health and safety and the environment.


- 3. After the completion of the program for post-closure for each municipal solid waste landfill Cell(s) at a Class III site, the Owner and/or Operator shall notify the NDEP that a certification, signed by an independent licensed professional engineer and approved by the NDEP verifying that the program has been completed in accordance with the plan for post-closure, has been placed in the operating record.

9.1 POST-CLOSURE MONITORING

The Owner and/or Operator shall inspect the components, structures, and equipment (e.g., fences, gates, signs) and conduct any monitoring, as required at each closed Cell(s), cell and/or pit, in accordance with Table 9.1 of this section:


Table 9.1 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	<p>For the first five to ten years, seeds have germinated and plants are becoming established on the site.</p> <p>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.</p> <p>Recommendations made by ecological specialist or biologist are implemented.</p>
Unsaturated/Vadose Zone Monitoring	Operation of the Area 5 Weighing Lysimeter Facility and TDR and heat dissipation probes buried in a representative	Volumetric water content greater than 30 percent for two consecutive years at the deepest TDR probe location requires consultation with NDEP and

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Activity	Requirement	Compliance Criteria and Actions
	number of closure covers at the Area 5 RWMS	expanded soil moisture monitoring beneath the waste zone.

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	Nov. 25, 2024 <i>Date</i>

