



**RCRA PERMIT
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY**



Permittee:	United States Department of Energy, Nevada Field Office	REVISION 7
	Nevada National Security Site	
Facility EPA ID#:	NV3890090001	
Permit Number:	NEV HW0101	

This Permit is issued by the Nevada Division of Environmental Protection (NDEP) under the authority of Section 3006 of the Resource Conservation and Recovery Act (RCRA) (40 CFR Part 271), Nevada Revised Statutes (NRS) 459.520 and Nevada Administrative Code (NAC) 444.842 through 444.8746 and 444.960. The State of Nevada has adopted 40 CFR Subpart A of Part 2, Subparts A and B of Part 124, and Parts 260 through 270 inclusive, by reference in the NAC at 444.8632 with exceptions listed at 444.86325 and as revised at 444.8633. This Permit is issued to The United States Department of Energy, National Nuclear Security Administration, Nevada Field Office (NNSA/NFO) (hereafter called the Permittee), to operate: 1) Mixed Waste Disposal Unit (MWDU): a mixed radioactive hazardous waste disposal facility; 2) Mixed Waste Storage Unit (MWSU): a mixed radioactive hazardous waste storage facility; 3) Hazardous Waste Storage Unit (HWSU): a nonradioactive hazardous waste storage facility; and 4) an Explosives Management Unit (EMU), formerly known as the Explosive Ordnance Disposal Unit (EODU), all located at the Nevada National Security Site (NNS), approximately 105 km (65 mi) northwest of Las Vegas, Nevada, summarily described as follows:

The MWDU is located in the southeastern portion of the NNS, within the Area 5 Radioactive Waste Management Complex (RWMC). The RWMC includes the Area 5 Radioactive Waste Management Site (RWMS) which is an active disposal site for low level waste. The MWDU is located near the northeastern corner of the RWMC, and consists of:

- Two (2) Subtitle C landfills:
 - Cell 18 (closed in 2020) with a design capacity of approximately 25,485 m³ (33,333 yd³)
 - Cell 25 with a design capacity of approximately 37,000 m³ (48,394 yd³)
- Two (2) aboveground storage tanks used to contain leachate:
 - 18-T1 (LPW-TNK-001) with a 3,000-gallon capacity
 - 25-T1 (LPW-TNK-002) with a 10,000-gallon capacity

The MWSU is located in the southeastern portion of the NNS, within the Area 5 RWMC. The MWSU consists of one (1) Transuranic (TRU) Pad Cover Building (TPCB) and TRU Pad (TP), with a maximum storage volume of 23,000 m³ (814,000 ft³).

The HWSU is located in the southeastern portion of the NNS, adjacent to the Area 5 RWMC. The HWSU is used to store hazardous, nonradioactive waste generated on the NNS. The unit was originally designed as a 90-day nonradioactive Hazardous Waste Accumulation Site (HWAS) and has been in operation since 1990. In 1995, the NDEP permitted the HWAS as a RCRA HWSU in order to provide the NNS with increased storage capability for hazardous waste.



RCRA PERMIT FOR A HAZARDOUS WASTE MANAGEMENT FACILITY



The HWSU consists of:

- One (1) prefabricated, rigid steel-framed roofed shelter. The floor is a monolithic pour with a coating applied to the exposed surfaces. The storage area floors are 31 meters (100 feet) long by 9.1 meters (30 feet) wide. Integral 15 cm (6 inch) curbs are provided above the 15 cm (6 inch) concrete floor slab, around the exterior of the structure and between the five (5) segregated storage cells.

The EMU is located in a remote portion of Area 11 within the NNSS. The controlled area containing the EMU includes approximately 20 acres of land and consists of:

- One (1) detonation area surrounded by an earthen pad, approximately 20 meters (66 feet) by 30 meters (100 feet)
- Ancillary equipment that includes an explosives magazine and firing point area

The Permittee is required to perform groundwater and leachate monitoring as well as post-closure care and monitoring. The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein, the Permit Application, and the applicable regulations contained in 40 CFR Parts 124, 260 through 266, and 270, and Sections 206, 212, and 224 of Hazardous and Solid Waste Amendments (HSWA), which require corrective action for all releases of hazardous wastes or constituents from any solid waste management unit (SWMU) at a treatment, storage, or disposal unit seeking a Permit, regardless of the time at which waste was placed in such unit, as specified in the Permit. If there are conflicts between this Permit and the Permit Application, the Permit shall prevail. Applicable regulations are those that are in effect on the date of issuance of the Permit, in accordance with 40 CFR 270.32(c) and NAC 444.8632.

This Permit is based on the assumption that the information submitted in the Part A and Part B Permit Application documents, dated January 2023, for the EMU and HWSU and April 2023 for the MWSU and MWDU, hereafter referred to as the Permit Application, is accurate and that the facilities are constructed and operated as specified in the Permit Application and this Permit.

Any inaccuracies found in the submitted information may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with 40 CFR 270.41, 270.42, 270.43, and NAC 444.8632 and for enforcement action. The Permittee must inform the Director of any deviation from or changes in the information in the application, which would affect the Permittee's ability to comply with the applicable regulations or Permit conditions. Failure to comply with any term or condition set forth in this Permit in the time or manner specified herein will subject the Permittee to possible enforcement action and penalties pursuant to NRS 459.565, 459.570, 459.585, and 459.595.

This Permit is effective as of April 17, 2023, and shall remain in effect until April 17, 2033, unless revoked and reissued under 40 CFR 270.41 and NAC 444.8632, terminated under 40 CFR 270.43 and NAC 444.8632, or continued in accordance with 40 CFR 270.51(a) and NAC 444.8632.



**RCRA PERMIT
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY**



This Permit shall be reviewed by the Director five (5) years after the date of Permit issuance or reissuance and shall be modified as necessary, as provided in NRS 459.520 and 40 CFR 270.50(d).

Christine Andres

Christine Andres
Chief, Bureau of Federal Facilities

April 4, 2023

Date

SECTION 1	General Permit Conditions
SECTION 2	General Facility Conditions
SECTION 3	Mixed Waste Disposal Unit
SECTION 4	Mixed Waste Disposal Unit Tank Storage
SECTION 5	Mixed Waste Storage Unit
SECTION 6	Hazardous Waste Storage Unit
SECTION 7	Explosives Management Unit
SECTION 8	Groundwater Detection Monitoring
SECTION 9	Vadose Zone Monitoring
SECTION 10	Post-Closure Conditions
Attachment 1	List of Documents adopted by this Permit

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1. SUMMARY

The Permittee is a non-commercial hazardous waste Treatment, Storage and Disposal Facility (TSDF). The Permittee may treat, store and/or dispose of all waste identified in the Part A applications and managed as identified in the Part B applications which are adopted by reference and are attachments to this Permit. All regulations cited in this Permit refer to regulations in effect on the date of issuance of this Permit. The Permittee is to maintain compliance with the conditions contained in this Permit and any self-implementing regulations promulgated after issuance.

1.1. EFFECT OF PERMIT

The Permittee is allowed to treat, store and/or dispose of hazardous and/or mixed waste in accordance with the conditions of this Permit and its attachments. Any treatment, storage and/or disposal of hazardous and/or mixed waste not authorized in this Permit is prohibited. Subject to 40 CFR 270.4, compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA, NRS 459.400 through 459.600, NAC 444.842 through 444.8746, NAC 444.960, 444.965 through 444.976 and the Hazardous & Solid Waste Amendments of 1984 (HSWA). Issuance of this Permit does not convey any property rights of any sort, nor any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, NRS 459.400 through 459.600, or any other law providing for protection of public health or the environment. [40 CFR 270.4 and 270.30(g)]

The State of Nevada has adopted 40 CFR Subpart A of Part 2, Subparts A and B of Part 124, Parts 260 through 270 inclusive, by reference in the NAC at 444.8632 with exceptions listed at 444.86325 and as revised at 444.8633. Therefore, all references to 40 CFR in this Permit shall be interpreted to include reference to NAC 444.8632.

Any ambiguity resulting from different language used in an attachment versus the body of this Permit shall be resolved in favor of terms and conditions found in the body of this Permit.

1.2. PERMIT ACTIONS

1.2.1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in 40 CFR 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit condition. [40 CFR 270.4(a) and 270.30(f)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.2.2. Permit Renewal

This Permit may be renewed as specified in 40 CFR 270.30(b) and Permit Condition 1.5.3. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [40 CFR 270.30(b), Hazardous Solid Waste Amendments (HSWA) Sec. 212]

13. **SEVERABILITY**

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

14. **DEFINITIONS**

For purposes of this Permit, terms used herein shall have the same meaning as those in NAC 444.842 through NAC 444.8746, NAC 444.965 through 444.976, as well as 40 CFR Parts 124, 260, 264, 266, 268, and 270, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. For purposes of this Permit, the definitions listed below will apply:

1.4.1. Asbestos

Asbestos means asbestiform varieties of: Chrysotile (serpentine); Crocidolite (riebeckite); Amosite (cummingtonite-grunerite); Anthophyllite; Tremolite; or Actinolite as defined in NRS 618.750(1)(a-f).

1.4.2. Certified Laboratory

A laboratory that has been approved by the Director to perform specific analyses referenced in NRS 459.500.

1.4.3. Closure plan

The plan for closure prepared in accordance with the requirements of 40 CFR 264.112.

1.4.4. Compliance Period

The number of years equal to the active life of the unit prior to the Director's approval of certification of closure and subsequent post-closure period.

1.4.5. Contamination

The presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in areas not affected by the operations of the facility.

1.4.6. Corrective Action

May include all corrective actions necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents at the facility, regardless of the time at which waste was placed in the unit, as required under 40 CFR 264.101. Corrective action may address releases to air, soil, surface water sediment, groundwater, or subsurface gas.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.4.7. Director

The Director of the Nevada Department of Conservation and Natural Resources (DCNR) or his/her designee or authorized representative. The Director's designee or authorized representative includes personnel of the Nevada Division of Environmental Protection (NDEP).

1.4.8. Facility

Includes all contiguous property and structures, other appurtenances, and improvements on the property, used for treatment, storage or disposal of hazardous waste. For the purpose of implementing corrective action under 40 CFR 264.100 and 40 CFR 264.101, the facility includes all contiguous property under the control of the operator seeking a permit under Subtitle C of RCRA.

1.4.9. Hazardous Constituents

Those substances listed in 40 CFR 261 Appendix VIII and/or 40 CFR Part 264 Appendix IX.

1.4.10. Hazardous Waste Management Unit

A contiguous area of land on or in which hazardous waste is managed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include surface impoundments, waste piles, land treatment areas, landfill cells, incinerators, tanks and their associated piping and underlying containment system, and container storage areas. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are managed.

1.4.11. Interim Measures

Actions necessary to minimize or prevent the further migration of contaminants and limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented.

1.4.12. Land Disposal

Placement in or on the land except for a corrective action management unit and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes. [40 CFR 268.2(c)]

1.4.13. Landfill

Any disposal at the facility or part of the facility where hazardous waste is or was placed in or on the land and is to be left in place.

1.4.14. Mixed Low-Level Waste

A waste that contains both low-level radioactive waste and RCRA hazardous waste.

RCRA PERMIT NEV HW0101 US DOE NNS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
---	--	------------

1.4.15. Post Closure Care Period

A thirty-year period beginning when a hazardous waste management unit is certified as closed, and during which time the Permittee shall be required to maintain, monitor, and report in accordance with the appropriate requirements of 40 CFR 264 Subparts F, K, L, M, N, and X. The post-closure care period is unit specific and may be more or less than thirty years. The Director may modify the post-closure care period applicable to a unit if it is found that an extended or reduced period is sufficient to protect human health and the environment.

1.4.16. Post-closure plan

The plan for post-closure care prepared in accordance with the requirements of 40 CFR 264.117 through 264.120.

1.4.17. Qualified Professional Engineer

A person who by reason of his/her professional education and practical experience is granted a license by the Nevada State Board of Professional Engineers and Land Surveyors to practice professional engineering.

1.4.18. Release

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

1.4.19. Schedule of Compliance

A schedule of remedial measures included in this Permit, including an enforceable sequence of interim requirements (e.g., actions, operations, or milestone events) leading to compliance with the Resource Conservation and Recovery Act and/or the State of Nevada Hazardous Waste Management Regulations.

1.4.20. Solid Waste

Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

1.4.21. Solid Waste Management Unit (SWMU)

Any unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. RCRA hazardous waste management units are also solid waste management units. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.4.22. Temporary Unit (TU)

Any temporary tanks and/or container storage areas used solely for treatment or storage of hazardous remediation wastes during remedial activities required under 40 CFR 264.101 or RCRA Section 3008(h). Designated by the Director, such units must conform to specific standards as specified in 40 CFR 264.553.

1.4.23. Unit

Includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, wastewater treatment unit, elementary neutralization unit, or recycling unit.

15. DUTIES AND REQUIREMENTS

1.5.1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [40 CFR 270.30(a)]

1.5.2. Compliance Schedules

Any schedule of compliance established subsequent to the issuance of this Permit shall be adopted by reference as a condition of Permit compliance as if fully set forth herein.

1.5.3. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit at least 180 days prior to Permit expiration. [40 CFR 270.10(h), 270.30(b)]

1.5.4. Permit Expiration

Pursuant to NRS 459.520 (4), this Permit shall be effective for a fixed term not to exceed ten (10) years. As long as the Director is the permit-issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application (see 40 CFR 270.10, 270.13 through 270.29) and, through no fault of the Permittee, the Director has not issued a new permit, as set forth in 40 CFR 270.51.

1.5.5. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. [40 CFR 270.30(c)]

1.5.6. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment. [40 CFR 270.30(d)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.5.7. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [40 CFR 270.30(e)]

1.5.8. Property Rights

This Permit does not convey any property rights of any sort, nor any exclusive privilege. [40 CFR 270.30(g)]

1.5.9. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. [40 CFR 264.74(a) and 40 CFR 270.30(h)]

1.5.10. Inspection and Entry

Pursuant to 40 CFR 270.30(i), the Permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents, as may be required by law, to:

- 1.5.10.1. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit.
- 1.5.10.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit.
- 1.5.10.3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit, and;
- 1.5.10.4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

1.5.11. Monitoring and Records

- 1.5.11.1 Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Director. Laboratory methods must be those specified in the current edition (and its current update) of EPA manual SW-846: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods-Standard Methods of Wastewater Analysis*, or an equivalent method, as specified in the Waste Analysis Plan, in Section B.3 of the MWDU Part B Permit Application. [40 CFR 270.30(j)(1)]

RCRA PERMIT NEV HW0101 US DOE NNS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
---	--	------------

1.5.11.1.1. Groundwater, leachate and soil samples for regulatory monitoring and remedial efforts must be sent to a Nevada-certified laboratory for analyses. [NRS 445A.425 and NRS 445A.427]

1.5.11.2. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records (for analyses conducted in the on-site laboratory), copies of all reports and records required by this Permit, the certification required by 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. In addition, the Permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations for the active life of the facility and throughout post-closure. These periods may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. [40 CFR 264.74(b) and 270.30(j)(2)]

1.5.11.3. Records of monitoring information shall specify [40 CFR 270.30(j)(3)]:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

1.5.12. Signatory Requirement

All applications, reports, or information submitted to or requested by the Director, his/her designee, or authorized representative, shall be signed and certified in accordance with 40 CFR 270.11 and 270.30(k) and NAC 444.8632.

1.5.13. Reporting Planned Changes

The Permittee shall give notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted facility. [40 CFR 270.30(l)(1)]

1.5.14. Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements. [40 CFR 270.30(l)(2)]

1.5.15. Certification of Construction or Modification

The Permittee may not commence treatment, storage or disposal of hazardous waste in any modified or newly constructed portion of the facility until:

1. The Permittee has submitted to the Director, by certified mail or hand delivery, a letter signed by the Permittee and a qualified Professional Engineer stating that the facility has been constructed or modified in compliance with the Permit [40 CFR 270.30(l)(2)(i)]; and
2. The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the Permit [40 CFR 270.30(l)(2)(ii)(A)]; or

RCRA PERMIT NEV HW0101 US DOE NNS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
---	--	------------

3. Within 15 calendar days of the date of submission of the letter in Section 1.5.15., 1. of this Permit, if the Permittee has not received notice from the Director of his or her intent to inspect, prior inspection is waived and the Permittee may commence treatment, storage, or disposal of hazardous waste. [40 CFR 270.30(l)(2)(ii)(B)]

1.5.16. Transfer of Permits

This Permit is not transferable to any person, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit pursuant to 40 CFR 270.40. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270, NAC 444.842 through 444.8746, NAC 444.960, and this Permit. [40 CFR 264.12(c), 270.30(l)(3)]

1.5.17. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this Permit or as required by a compliance schedule issued pursuant to Permit Condition 1.5.2. [40 CFR 270.30(l)(4)]

1.5.18. Compliance Schedules

Written reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit or issued as an enforcement action, shall be submitted electronically no later than 14 calendar days following each schedule date. [40 CFR 270.30(l)(5)]

1.5.19. Twenty-Four Hour Reporting

- 1.5.19.1. The Permittee shall report to the Director any noncompliance which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall include the following:

1. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
2. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility which could threaten the environment or human health.

- 1.5.19.2. The description of the occurrence and its cause shall include:

1. Name, address, and telephone number of the owner or operator;
2. Name, address, and telephone number of the facility;
3. Date, time, and type of incident;
4. Name and quantity of materials involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable, and;
7. Estimated quantity and disposition of recovered material that resulted from the incident.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.5.19.3. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Director may waive the five-day written notice requirement in favor of a written report within 15 days. [40 CFR 270.30(l)(6)(iii)]

1.5.20. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition 1.5.19.2. [40 CFR 270.30(l)(10)]

1.5.21. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information. [40 CFR 270.30(l)(11)]

1.5.22. Information Repository

The Permittee shall maintain at the facility the information repository created in support of all permit applications, renewals and modifications pursuant to 40 CFR 124.33(c) through (f) for the life of the facility and/or the life of the Permit whichever is longer. [40 CFR 270.30(m)]

16. **LAND DISPOSAL RESTRICTIONS**

1.6.1. General Waste Restrictions

1.6.1.1. The Permittee shall not store any non-radioactive hazardous waste restricted from land disposal under Subpart C of 40 CFR Part 268, except for the purpose of accumulation of such quantities of hazardous waste as necessary to facilitate proper treatment or disposal. Each container of non-radioactive restricted hazardous waste must be clearly marked to identify its contents and the date storage began. The Permittee may store such wastes beyond one (1) year; however, the Permittee bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal. [40 CFR 268.50(c)]

1.6.1.2. "Restricted Waste" means any hazardous waste restricted from land disposal under the authority of Section 3004 of RCRA or regulated by 40 CFR Part 268. Non-restricted waste mixed with restricted waste becomes restricted waste and must meet the applicable standards of 40 CFR Part 268.

1.6.1.3. The Permittee shall not in any way dilute a restricted waste as a substitute for adequate treatment to achieve compliance with 40 CFR Part 268 Subpart D, to circumvent the effective date of prohibition in 40 CFR Part 268 Subpart C, or to circumvent a land disposal prohibition imposed by RCRA Section 3004.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.6.2. Condition 1.6.1. does not apply to wastes which are subject of an approved petition under 40 CFR 268.6, or a nationwide variance contained in Subpart C of 40 CFR Part 268, or an approved extension under 40 CFR 268.5.

1.6.3. Condition 1.6.1. does not apply to wastes that meet the treatment standards specified under 40 CFR 268.40, 268.42, or to wastes that are in compliance with the applicable prohibitions specified in 40 CFR 268.31, or in Section 3004 of RCRA.

1.6.4. Record-keeping Requirements

1.6.4.1. The Permittee shall maintain, in the operating record, records and results of waste analysis performed, as required by 40 CFR 268.7.

1.6.4.2. The Permittee shall maintain, in the operating record, documentation that they have complied with the notification and certification requirements of 40 CFR 268.7 for all hazardous wastes that are sent off-site.

17. WASTE MINIMIZATION

Pursuant to 40 CFR 264.73(b)(9), the Permittee shall include a certification in the Facility operating record, no less often than annually, that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste it generates, to the degree determined to be economically practicable; and that the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. The Permittee shall maintain an annual Waste Minimization Report in the Facility operating record.

18. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR

All reports, notifications, or other submissions required by this Permit shall be sent electronically to the designee of NDEP, or any hard copies may be sent to the addressee shown below, and must be **received** by the specified due date:

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

19. CONFIDENTIAL INFORMATION

In accordance with 40 CFR 270.12, the Permittee may claim confidential any information required to be submitted by this Permit.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 1 GENERAL PERMIT CONDITIONS	REVISION 7
--	--	------------

1.10. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed, the following documents and all amendments, revisions and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR 264.13 and this Permit;
2. Inspection schedules, as required by 40 CFR 264.15(b)(2) and this Permit;
3. Personnel training documents and records, as required by 40 CFR 264.16(d) and this Permit;
4. Contingency Plan, as required by 40 CFR 264.53(a) and this Permit;
5. Operating Record, as required by 40 CFR 264.73 and this Permit;
6. Biennial Report (electronic copy), as required by 40 CFR 264.75 and this Permit;
7. Closure Plan, as required by 40 CFR 264.112(a) and this Permit;
8. All Groundwater Monitoring Records inclusive of installation details for all wells installed as required by this Permit or otherwise;
9. Corrective Action Plans and Reports;
10. All instances of implementation of the Contingency Plan;
11. All correspondence related to changes or modifications to this Permit;
12. Unusual Occurrence Reports documenting circumstances, such as: all manifest discrepancies, deficiencies found as a result of an inspection, all releases whether contained by secondary containment or not, all injuries to personnel, all activations of the alarm system, any non-compliance with this Permit, etc.; and
13. Engineering Report and the Specifications for the Radioactive Waste Management Complex.

1.11. AGREEMENTS AND CONSENT ORDERS

Reserved

1.12. COMPLIANCE SCHEDULES

Refer to specific sections of this Permit for any compliance schedules established by the Director.

2. **SUMMARY**

The Permittee is required to operate the facility consistent with the accepted practices detailed in this and other sections of the Permit and Permit Application in order to minimize the possibility of releases to the environment or harm to either employees or the public at large.

2.1. **DESIGN AND OPERATION OF FACILITY**

The Permittee shall construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31 and this Permit. The Permittee shall operate the facility as specified in all sections of the Permit Application. This Permit adopts specific sections of the application referencing specific management practices, etc. However, the Permittee shall also comply with any section of the Permit Application not specifically referenced in this Permit.

2.2. **MIXED WASTES (RADIOACTIVE AND HAZARDOUS WASTES)**

The Permittee shall not accept or manage any hazardous waste except as defined within the MWDU, MWSU, HWSU, and EMU Permit Application. The Mixed Low-Level Waste (MLLW) and Hazardous Waste is characterized and identified in Part B of the Permit Application.

2.3. **REQUIRED NOTICES**

2.3.1. Waste Imports

The Permittee shall notify the Director in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source, as required by 40 CFR 264.12(a)(1). Notice of subsequent shipments of the same waste from the same foreign source is not required.

2.3.2. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), the Permittee must inform the generator in writing that they have the appropriate permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]

2.4. **GENERAL WASTE ANALYSIS**

The Permittee shall comply with the waste analysis requirements of 40 CFR 264.13 by following the Waste Analysis Plan procedures of Permit Application Section B.3 (MWDU, MWSU, EMU and HWSU), and the conditions listed below:

The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846 or an equivalent method as specified in the Waste Analysis Plan, as approved by the Director. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must use analytical methods as approved in this Permit.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 2 GENERAL FACILITY CONDITIONS	REVISION 7
--	--	------------

2.4.1. Waste Stream Review

Through the Department of Energy (DOE) Radioactive Waste Acceptance Program (RWAP) and the Waste Acceptance Review Panel (WARP), the Permittee shall submit to the Director for review, all new MLLW waste streams submitted to the Permittee for land disposal. The submitted information shall, at a minimum, contain the following documents:

1. A completely filled out Waste Profile;
2. Supporting documentation, such as Technical Basis Documents; and
3. Others as requested by the Director.

2.5. **SECURITY**

The Permittee shall comply with the security provisions of 40 CFR 264.14(b)(2) and (c) by complying with the Security Plan in Permit Application Section B.4 (MWDU, MWSU, EMU and HWSU).

2.6. **GENERAL INSPECTION REQUIREMENTS**

The Permittee shall comply with the Inspection Plan requirements of 40 CFR 264.15 by following the Inspection Plan procedures in the Permit Application Section B.5 (MWDU, MWSU, EMU and HWSU). The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of all inspections shall be kept, as required by 40 CFR 264.15(d).

2.7. **PERSONNEL TRAINING**

The Permittee shall conduct personnel training, as required by 40 CFR 264.16. The Permittee shall follow the Personnel Training Program procedures in the Permit Application Section B.12 (MWDU, MWSU, EMU and HWSU), and maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

2.7.1. Training Program

2.7.1.1. Facility Personnel

Facility personnel must successfully complete a program of classroom instruction or on-the- job training that teaches them to perform their duties in a way that ensures the facility’s compliance with the requirements of this Permit. The Permittee must ensure that this program includes all the elements described in the document required under 40 CFR 264.16(d)(3).

[40 CFR 264.16(a)(1)]

2.7.1.2. Instructor Qualifications and Training Content

The training program must be directed by a person trained in hazardous waste management procedures and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed. [40 CFR 264.16(a)(2)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 2 GENERAL FACILITY CONDITIONS	REVISION 7
--	--	------------

2.7.1.3. Emergency Response

At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems, including, where applicable:

[40 CFR 264.16(a)(3)]

1. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
2. Key parameters for automatic waste feed cut-off systems;
3. Communications or alarm systems;
4. Response to fires or explosions;
5. Response to ground-water contamination incidents; and
6. Shutdown of operations.

2.7.1.4. For facility employees that receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this section, provided that the overall facility training meets all the requirements of 40 CFR 264.16.

2.7.2. Training Schedule

Facility personnel must successfully complete the program required in Permit Condition 2.7.1 within six (6) months after the date of their employment or assignment to the facility, or to a new position at the facility, whichever is later.

2.7.3. Annual Review

Facility personnel must take part in an annual review of the initial training required in Permit Condition 2.7.1.

2.7.4. Documentation

The Permittee shall maintain the following documents and records at the facility:

1. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;
2. A written job description for each position listed under (1), above. This description may be consistent in its degree of specificity with descriptions of other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
3. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under (1), above; and
4. Records that document that the training or job experience required under Permit Conditions 2.7.1, 2.7.2 and 2.7.3 has been given to, and completed by, facility personnel.

2.7.5. Record Keeping

Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three (3) years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 2 GENERAL FACILITY CONDITIONS	REVISION 7
--	--	------------

2.8. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of 40 CFR 264.17. Ignitable, corrosive, reactive, and incompatible wastes shall not be accepted for disposal at the MWDU, per Section B.9 of the Part B Permit Application.

2.9. RESTRICTED WASTES

The Permittee is only authorized to receive, store, or otherwise manage the wastes listed in Table 2, Section B.2 (MWDU, MWSU, EMU and HWSU) of the Part B Permit Application.

2.10. PREPAREDNESS AND PREVENTION

2.10.1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Contingency Plan in Part B of the Permit Application, Section B.7 (MWDU, MWSU, EMU and HWSU), as required by 40 CFR 264.32.

2.10.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in the Contingency Plan in Permit Application Section B.7 (MWDU, MWSU, EMU and HWSU), as required by 40 CFR 264.33.

2.10.3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.

2.10.4. Required Aisle Space

The Permittee must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency; unless it can be demonstrated to the Director that aisle space is not needed for any of these purposes. [40 CFR 264.35]

2.10.5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with State and local authorities as specified in Permit Application Section B.6 (MWDU, MWSU, EMU and HWSU), as required by 40 CFR 264.37. If State or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

2.11. CONTINGENCY PLAN

2.11.1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan in Permit Application Section B.6 (MWDU, MWSU, EMU and HWSU), whenever there is a fire, explosion, or release of hazardous waste or constituents, which could threaten human health or the environment.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 2 GENERAL FACILITY CONDITIONS	REVISION 7
--	--	------------

2.11.2. Copies of Plan

A copy of the Contingency Plan and all revisions to the plan, per 40 CFR 264.53, must be:

1. Maintained at the facility; and
2. Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

2.11.3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 CFR 264.54.

2.11.4. Emergency Coordinator

A qualified emergency coordinator shall be available at all times in case of an emergency, as required by 40 CFR 264.55. The emergency coordinator shall comply with the requirements of 40 CFR 264.56.

2.12. **MANIFEST SYSTEM**

The Permittee shall comply with the manifest requirements of 40 CFR 262.24, 264.71, 264.76, and NAC 444.8666 by following the procedures in Permit Application Section B.3 (MWDU, MWSU, EMU and HWSU) consistent with:

1. Signing and dating each copy of the manifest to certify that the hazardous waste covered by the manifest was received¹;
2. Noting any significant discrepancies in the manifest as defined below, on each copy of the manifest²:
 - a. Waste Types - Manifest discrepancies between the type of hazardous waste designated on the manifest or shipping paper, and the type of hazardous waste the facility actually receives, or obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper or,
 - b. Waste Quantities - For bulk waste, variations greater than 10 percent in weight, for batch waste, any variation in piece count, such as a discrepancy of one (1) drum in a truckload.
3. Immediately give the transporter at least one (1) copy of the signed manifest;
4. Within 30 days after the delivery, send a copy of the manifest to the generator; and
5. Retain at the facility a copy of each manifest for at least three (3) years from the date of delivery.
6. The Permittee shall comply with the Manifest discrepancies requirements of 40 CFR 264.72 by reconciling the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within fifteen (15) days after receiving the waste, the Permittee must immediately submit to the Director a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper.

¹ Compliance with EPA's new Hazardous Waste Electronic Manifest (e-Manifest System and User Fee Final Rule [<https://www.gpo.gov/fdsys/pkg/FR-2018-01-03/pdf/2017-27788.pdf>]) is required.

² *Comment:* The Director does not intend that the Permittee (who performs procedures under § 264.13(c)) perform that analysis before signing the manifest and returning it to the transporter. §264.72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.

2.13. RECORDKEEPING AND REPORTING

In addition to the recordkeeping, reporting and fee requirements specified elsewhere in this Permit, the Permittee shall do the following:

2.13.1. Operating Record

2.13.1.1. The Permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73.

2.13.1.2. The Permittee shall maintain at the facility copies of waste minimization documents and shall make them available to any authorized representative of the NDEP or USEPA conducting an inspection pursuant to 40 CFR 264.74.

2.13.2. Soil Characterization Report (EMU)

The Permittee shall conduct a soil characterization within one year of the permit issuance and every five years thereafter over the life of the unit and prior to closure of the unit. The soil characterization shall be reported in a format agreed upon by the Director and Permittee.

2.13.3. Biennial Reports

The Permittee shall comply with the biennial reporting requirements of 40 CFR 264.75.

2.13.4. Quarterly Asbestos Report

The Permittee shall prepare and submit to the Director a report of the Asbestos Low-Level Waste received at the site in accordance with NAC 444.972 and agreements reached with the NDEP. The report must be submitted to the Director within 30 (thirty) days following the end of each calendar quarter, in a format agreed upon by the Director and Permittee.

2.13.5. Annual Asbestos Report

The Permittee shall prepare and submit to the Director a report of the Asbestos Low-Level Waste received at the site for the calendar year. The report must be submitted to the Director within 30 (thirty) days following the end of each calendar year, in a format agreed upon by the Director and Permittee.

2.13.6. Annual Groundwater Report

The Permittee shall prepare and submit to the Director a report of the previous year's analytical and field data results for the calendar year. The report must be submitted to the Director by May 31 of each year, in a format agreed upon by the Director and Permittee.

2.13.7. Annual Post-Closure Monitoring Report

The Permittee shall prepare and submit to the Director a report of the results of the previous year's post-closure monitoring activities for the calendar year. The report must be submitted to the Director by May 31 of each year, in a format agreed upon by the Director and Permittee.

2.13.8. Annual Summary/Waste Minimization Report

The Permittee shall prepare and submit an annual report by March 1 of the following year. The report shall contain the following information:

1. The EPA identification number, name, and address of the facility;
2. The calendar year covered by the report;
3. The EPA identification number of each generator from which the Permittee received a waste stream during the year (where applicable). In addition, the name and address of foreign generators shall be provided for all imported shipments (where applicable);
4. A description and quantity of each waste stream in tons and cubic feet received at the facility. This information must be listed by EPA identification number for each generator;
5. The method of treatment, storage, and/or disposal for each waste stream;
6. A description of the waste minimization efforts undertaken during the year to reduce the volume and toxicity of wastes generated by the Permittee;
7. A description of the changes in volume and toxicity of waste actually achieved during the year, in comparison to previous years;
8. Unusual occurrence reports covering all rejected shipments during the year and copies of the quarterly reviews of these reports which is required by the WAP. Any letters sent to a generator/broker during the year as required by the WAP must also be included;
9. The certification signed by the operator of the facility or his authorized representative; and
10. The results of tank integrity assessments.

2.14. GENERAL CLOSURE REQUIREMENTS

2.14.1. Performance Standard

The Permittee shall close the facility, as required by 40 CFR 264.111 and in accordance with the Closure Plan in Part B of the Permit Application Section B.13 (MWDU, MWSU, EMU and HWSU).

2.14.2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan, in accordance with 40 CFR 264.112(c), whenever necessary.

2.14.3. Notification of Closure

The Permittee shall notify the Director in writing at least 45 days prior to the date on which the facility expects to begin partial or final closure of the facility, as required by 40 CFR 264.112(d).

2.14.4. Time Allowed for Closure

After receiving the final volume of hazardous waste in any or all of the regulated units, the Permittee shall treat, remove from the unit or facility, or dispose of on-site all hazardous wastes and shall complete closure activities, in accordance with 40 CFR 264.113 and the schedules specified in the Closure Plan in Permit Application Section B.13 (MWDU, MWSU, EMU and HWSU), and/or as determined by the Director.

2.14.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate or ship off-site all contaminated equipment, structures, and soils, as required by 40 CFR 264.114 and the Closure Plan. In the event not all structures, soils or equipment can be shipped off-site, the Permittee shall close the facility as determined by the Director.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 2 GENERAL FACILITY CONDITIONS	REVISION 7
--	--	------------

2.14.6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan in Permit Application Section B.13 (MDWU, MWSU, EMU and HWSU), as required by 40 CFR 264.115.

2.15. GENERAL POST-CLOSURE REQUIREMENTS

2.15.1. Post-Closure Care Period

The Permittee shall begin post-closure care for each landfill (cell) after completion of closure of the cell and continue post-closure care for at least 30 years after that date. Post-closure care shall be in accordance with the Post-Closure Plan in Permit Application Section B.13, as required by 40 CFR 264.117.

2.15.2. Amendment to Post-Closure Plan

The Permittee shall amend the Post-Closure Plan, in accordance with 40 CFR 264.118(d), whenever necessary.

2.15.3. Post-Closure Notices

2.15.3.1. No later than 60 days after certification of closure of each hazardous waste disposal unit, the Permittee shall submit records of the type, location, and quantity of hazardous waste disposed of within each cell or disposal unit, in accordance with 40 CFR 264.119(a).

2.15.3.2. Within 60 days of certification of closure of each hazardous waste disposal unit, the Permittee shall submit a request to the Director and the Nevada Division of State Lands to record a notation on the deed (or other instrument normally examined during title search regarding the facility property), in accordance with 40 CFR 264.119(b)(1).

2.15.3.3. The Permittee shall request and obtain a permit modification prior to post-closure removal of hazardous wastes, hazardous waste residues, liners, or contaminated soils, in accordance with 40 CFR 264.119(c).

2.15.4. Certification of Completion of Post-Closure Care

The Permittee shall certify that the post-closure care period was performed in accordance with the specifications in the Post-Closure Plan in Permit Application Section B.13, as required by 40 CFR 264.120.

2.16. FINANCIAL REQUIREMENTS FOR CLOSURE AND POST CLOSURE

The Permittee is exempt from the financial requirements according to 40 CFR 264.140(c).

2.17 COMPLIANCE SCHEDULE

Reserved

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 3 MIXED WASTE DISPOSAL UNIT	REVISION 7
--	--	------------

3. **SUMMARY**

The Mixed Waste Disposal Unit (MWDU) is located in the southeastern portion of the NNSS, within the Area 5 Radioactive Waste Management Complex (RWMC). The RWMC includes the Area 5 RWMS which is an active disposal site for low level waste. The MWDU is located near the northeastern corner of the RWMC. It consists of two (2) Subtitle C landfill Cells (Cell 18 [closed] and Cell 25) with a total design capacity of approximately 62,485 m³ (81,727 yd³).

3.1. **PERMITTED AND PROHIBITED WASTE IDENTIFICATION**

The Permittee may dispose of the following hazardous wastes in Landfill Cell 25, subject to the terms of this Permit:

- 3.1.1. The Permittee may dispose of hazardous wastes as identified in the Part A and Part B of the MWDU application, and other hazardous wastes as identified in NAC 444.843, including wastes containing polychlorinated biphenyls, subject to the terms and limitations of this Permit.
- 3.1.2. The Permittee is prohibited from disposing of hazardous waste that is not identified in Permit Condition 3.1.1.
- 3.1.3. The Permittee may dispose a total volume of 37,000 m³ (48,394 yd³) hazardous waste in Landfill Cell 25, subject to the terms of this Permit.

3.2. **DESIGN, CONSTRUCTION AND OPERATING REQUIREMENTS**

The Permittee shall design, construct, and operate the landfill, under the following conditions:

- 3.2.1. The Permittee shall install, at a minimum, two (2) liners and a leachate collection and removal system (one [1] above and one [1] between the liners) for the landfill cell, in accordance with the design plans and reports contained in the documents in Permit Attachment 1. [40 CFR 264.301(c)]
- 3.2.2. The Permittee shall manage collected leachate in accordance with the design plans and reports contained in the documents in Permit Attachment 1, and specifically described in Section B.1.b.1 of the Part B MWDU Permit Application.
- 3.2.3. The Permittee shall design, construct, operate, and maintain a run-on/run-off control system in accordance with the design plans, specifications, and operating practices contained in the documents listed in Permit Attachment 1, and specifically described in Section B.1.b.2 of the Part B MWDU Permit Application. [40 CFR 264.301(g) and (h)]
- 3.2.4. The Permittee shall empty or otherwise manage run-on and run-off collection and holding facilities to maintain the design capacity of the system in accordance with the design plans and operating practices specified in the documents listed in Permit Attachment 1, and specifically described in Section B.1.b.2 of the Part B MWDU Permit Application. [40 CFR 264.301(i)]
- 3.2.5. The Permittee shall cover or otherwise manage the landfill to control wind dispersal of particulate matter, in accordance with the methods specified in Section B.20.a.8 of the Part B MWDU Permit Application. [40 CFR 264.301(j)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 3 MIXED WASTE DISPOSAL UNIT	REVISION 7
--	--	------------

3.2.5.1. Collected leachate may be used for dust suppression within the same cell from which it was generated, provided the collected leachate never leaves the landfill.

3.3. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the landfill in accordance with the following conditions:

3.3.1 The Permittee shall inspect the liners and cover systems during construction and installation for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials).
[40 CFR 264.303 (a)]

3.3.2 The Permittee shall inspect the landfill immediately after construction or installation.
[40 CFR 264.303(a)(1) and (2)]

3.3.2.1. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

3.3.2.2. Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

3.3.3. The Permittee shall inspect the landfill in accordance with the inspection schedule in Section B.5 of the Part B MWDU Permit Application. [40 CFR 264.303(b)] The landfill must be inspected weekly and after storms to detect evidence of any of the following:

1. Deterioration, malfunctions, or improper operation of run-on and run-off systems;
2. Proper functioning of wind dispersal control systems; and
3. The presence of leachate in, and proper functioning of, leachate collection and removal systems.

3.4. CELL LOCATION SURVEYING

The Permittee shall maintain the following items in the operating record: [40 CFR 264.73 and 40 CFR 264.309]

1. A map with the exact location and dimensions (including depth) of each landfill cell with respect to permanently surveyed benchmarks; and
2. The types of waste in each landfill cell and the approximate location of each hazardous waste type within each landfill cell.

3.5. CLOSURE AND POST-CLOSURE CARE

The Permittee shall conduct closure and post-closure activities in accordance with the following conditions:

3.5.1. At final closure of the landfill cell, the Permittee shall follow the procedures in the approved closure plan contained in Section B.13 of the Part B MWDU Permit Application.
[40 CFR 264.310(a)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 3 MIXED WASTE DISPOSAL UNIT	REVISION 7
--	--	------------

3.5.2 After final closure, the Permittee shall follow the plans and procedures in the approved Post Closure Care Plan contained in Section B.13 of the Part B MWDU Permit Application. [40 CFR 264.310(b)]

3.6. SPECIAL LANDFILL PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

3.6.1. The Permittee shall not place ignitable or reactive wastes in the landfill cell.

3.7. SPECIAL LANDFILL PROVISIONS FOR INCOMPATIBLE WASTES

3.7.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same landfill cell.

3.8. SPECIAL LANDFILL PROVISIONS FOR LIQUID WASTE

3.8.1. The Permittee shall not knowingly place bulk or non-containerized liquid wastes or waste containing free liquids in a landfill. The use of leachate as dust suppression within the same cell from which it was generated, in accordance with Permit Section 3.2.5.1., is not considered placement under this section. [40 CFR 264.314(a)]

3.8.2 In situations where the existence of free liquids is a possibility, prior to disposal in the landfill the Permittee shall demonstrate the absence of free liquids in either a containerized or bulk waste by the following test: “Method 9095 (Paint Filter Liquids Test)” as described in *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods* (EPA Publication No. SW-846). [40 CFR 264.314(b)]

3.8.3. The Permittee shall not place containers holding free liquid in the landfill unless:

All free-standing liquid:

- (i) has been removed by decanting, or other methods;
- (ii) has been mixed with absorbent or solidified so that free-standing liquid is no longer observed; or
- (iii) has been otherwise eliminated. [40 CFR 264.314(c)]

3.9. SPECIAL REDUCTION REQUIREMENTS FOR EMPTY CONTAINERS

3.9.1. The Permittee shall not dispose of any containers in the landfill unless they are at least 90 percent full when placed in the landfill or they are crushed, shredded, or similarly reduced in volume to the maximum practical extent before placement in the landfill. [40 CFR 264.315]

3.10. COMPLIANCE SCHEDULE

Reserved

4. SUMMARY

The tank storage portion of the MWDU includes two (2) leachate storage tanks. The maximum amount and type of waste that may be handled are discussed below in Permit Condition 4.1.

4.1. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- 4.1.1. The Permittee may store in leachate tanks 18-T1 and 25-T1 any hazardous waste identified in Part A of the MWDU Permit Application, and other hazardous wastes as identified in NAC 444.843, including Polychlorinated biphenyl (PCB), subject to the terms of this Permit.
- 4.1.2. The Permittee is prohibited from storing hazardous waste that is not identified in Permit Condition 4.1.1.
- 4.1.3. The Permittee may store a total volume of 13,000 gallons of leachate in the leachate tanks listed below in Table 4.1, subject to the terms of this Permit and as follows:

Table 4.1

Tank ID #	Secondary Containment Required	Cell ^a	Description	Capacity
18-T1	Yes-In Place	18	Leachate Storage Tank	3,000 gallons
25-T1	Yes-In Place	25	Leachate Storage Tank	10,000 gallons
Total =				13,000 gallons

^a Cell 18 is in post-closure; Cell 25 is active

- 4.1.4. The Permittee shall empty leachate from the leachate tanks listed in Table 4.1 within sixty (60) days of transferring leachate to the leachate tanks.

4.2. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

- 4.2.1. The Permittee shall design, construct, and operate the secondary containment system(s), in accordance with the detailed design plans and descriptions contained in the MWDU Engineering Report and Specifications Report. [40 CFR 264.193(b)-(f)]
- 4.2.2. The Permittee shall submit the integrity assessments required under 40 CFR 264.192 to the Director prior to operation of any new tank system.

4.3. OPERATING REQUIREMENTS

- 4.3.1. The Permittee shall not place hazardous wastes in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. [40 CFR 264.194(a)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 4 MIXED WASTE DISPOSAL UNIT TANK STORAGE	REVISION 7
--	---	------------

- 4.3.2. The Permittee shall prevent spills and overflows from the tank or containment systems using the methods described in MWDU Part B Permit Application Section B.8. [40 CFR 264.194(b)]
- 4.3.3. Except as otherwise provided in 261.3(c)(2)(ii), (g) or (h), any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. [40 CFR 261.3(c)(2)(i)]
- 4.3.4. The Permittee must collect a sample within fourteen (14) days of transferring leachate to the leachate collection tank(s) and it must be analyzed for the analytes listed in Section 8, Tables 8.4 and 8.5, of this Permit and in Exhibit 11 in Part B of the MWDU Permit Application.
- 4.3.5. The Permittee may use collected leachate that does not exceed Groundwater Protection Standards for any contaminants identified in Tables 8.4 and 8.5 of this Permit for dust suppression on the cell from which it was generated within sixty (60) days of the initial transfer of leachate to the leachate collection tank(s).
- 4.3.6. Should leachate exceed Groundwater Protection Standards for any contaminants identified in Table 8.4 of Permit Section 8, the leachate will be managed as hazardous waste in accordance with all applicable regulations.
- 4.3.7. Should sample results from leachate collected in the storage tank exceed Groundwater Protection Standards for any contaminant identified in Table 8.4, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of discovering the exceedance. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request.
- 4.3.8. Should tritium concentration in leachate exceed 1,330,000 pCi/L, the leachate may not be used for dust suppression.
- 4.3.9. Leachate Storage Tanks 18-T1 and 25-T1 are RCRA hazardous waste units and will be managed in accordance with applicable regulations at 40 CFR 264.190 et seq. (Subpart J) including containment and detection of releases, general operating requirements, inspections, response to spills or leaks, closure and post-closure care, special requirements for ignitable, reactive, or incompatible wastes, and air emission standards.
- 4.3.10. The words, “RCRA Hazardous Waste Tank” will be prominently placed on the Leachate Storage Tank(s) to clearly identify it as a regulated and permitted hazardous waste management unit.

4.4. RESPONSE TO LEAKS OR SPILLS

In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Permittee shall comply with MWDU Part B Permit Application, Section B.8.g, and remove the system from service immediately, and complete the following actions: [40 CFR 264.196(a)-(f)]

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 4 MIXED WASTE DISPOSAL UNIT TANK STORAGE	REVISION 7
--	---	------------

- 4.4.1. Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.
- 4.4.2. Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. If the Permittee finds that it will not be possible to meet this time period, the Permittee shall notify the Director and demonstrate that a longer time period is required.

If the collected material is a RCRA hazardous waste, it must be managed in accordance with all applicable requirements of 40 CFR Parts 262-264. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a Publicly Owned Treatment Works, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

- 4.4.3. Contain visible releases to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.
- 4.4.4. Close the system in accordance with the Closure Plan in MWDU Part B Permit Application, Section B.13, unless the following actions are taken:
 - 4.4.4.1. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.
 - 4.4.4.2. For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning it to service.
 - 4.4.4.3. For a release to the environment caused by a leak from a component of the tank system that is below ground and does not have secondary containment, the Permittee must provide this component with secondary containment that meets the requirements of 40 CFR 264.193 before the component can be returned to service.
 - 4.4.4.4. For a release to the environment caused by a leak from the aboveground portion of the tank system that does not have secondary containment, and can be visually inspected, the Permittee shall repair the tank system before returning it to service.
 - 4.4.4.5. For a release to the environment caused by a leak from the portion of the tank system that is not readily accessible for visual inspection, the Permittee shall provide secondary containment that meets the requirements of 40 CFR 264.193 before the component can be returned to service.
 - 4.4.4.6. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in 40 CFR 264.192 and 264.193.

4.4.5. For all major repairs to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, Nevada-registered Professional Engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault. The Permittee shall place the certification of the repairs in the operating record and maintain until facility closure.

4.5. INSPECTION SCHEDULES AND PROCEDURES

4.5.1. The Permittee shall inspect the tank systems in accordance with the inspection schedules within MWDU Part B Permit Application, Section B.5 and/or Exhibit 10, and include the following as part of those inspections: [40 CFR 264.195(a), (b) and (c)]

1. The overfill controls;
2. Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;
3. Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and
4. Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

4.5.2. The Permittee shall document compliance with Permit Conditions 4.5.1 and place this documentation in the operating record of the facility. [40 CFR 264.195(h)]

4.6. RECORDKEEPING AND REPORTING

4.6.1. The Permittee shall report to the Director, verbally and/or electronically, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. If the Permittee has reported the release pursuant to 40 CFR 302, this report satisfies the requirements of this Permit Condition. [40 CFR 264.196(d)(1)] A leak or spill of one (1) pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. [40 CFR 264.196(d)(2)]

4.6.2. Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the Permittee shall provide to the Director a written report submitted electronically or to the NDEP address listed in Section 1.8, the following information: [40 CFR 264.196(d)(3)]

1. Likely route of migration of the release;
2. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 4 MIXED WASTE DISPOSAL UNIT TANK STORAGE	REVISION 7
--	---	------------

3. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee should provide the Director with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;
4. Proximity of down-gradient drinking water, surface water, and populated areas; and
5. Description of response actions taken or planned.

4.6.3. The Permittee shall submit to the Director all certifications of major repairs to correct leaks within seven (7) days after returning the tank system to use. [40 CFR 264.196(f)]

4.6.4. The Permittee shall obtain, and keep on file at the facility, the written statements by those persons required to certify the design and installation of the tank system. [40 CFR 264.192(g)]

4.6.5. The Permittee shall maintain at the facility a record of the results of leak tests and integrity tests conducted, in accordance with 40 CFR 264.192(d).

4.6.6. The Permittee shall submit to the Director the leachate analytical results in accordance with Permit Condition 8.7.2.

4.7. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

4.7.1. The Permittee shall not place ignitable or reactive waste in the tank system or in the secondary containment system. [40 CFR 264.198(a)]

4.8. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

4.8.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system. [40 CFR 264.199(a)]

4.8.2. The Permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material. [40 CFR 264.199(b)]

4.9. CLOSURE AND POST-CLOSURE CARE

4.9.1. At closure of the tank system(s), the Permittee shall follow the procedures in the Closure Plan, in MWDU Part B Permit Application, Section B.13. [40 CFR 264.197(a)]

4.9.2. If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the Closure Plan, then the Permittee shall close the tank system(s) and perform post-closure care in accordance with 40 CFR 264.197(b).

4.10. COMPLIANCE SCHEDULE

Reserved

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 5 MIXED WASTE STORAGE UNIT	REVISION 7
--	---------------------------------------	------------

5. SUMMARY

The Permittee is allowed to store mixed waste (hazardous waste with a radioactive component) in containers subject to the terms and conditions of this Permit as described in this Section. Mixed waste containers are managed in the areas noted in the MWSU Part B Permit Application, Section B.1. Both liquids and solids managed in containers are accepted and stored while awaiting treatment, disposal, or off-site shipment. The specific management requirements of each area are specified below.

5.1. CONTAINER STORAGE

The mixed waste container storage areas are identified in MWSU Part B Permit Application, Section B.1. The maximum amount and type of mixed waste that may be handled are discussed below in Permit Condition 5.3.

5.2. CONTAINER-SPECIFIC INFORMATION TO BE MAINTAINED AT THE FACILITY

521. The Permittee shall maintain at the facility, until closure is completed for the mixed waste container storage areas and certified by a qualified professional engineer, the following container-specific documents and information and all amendments, revisions and modifications to these documents and information:

5.2.1.1. A description of the containment systems including:

1. Basic design parameters, dimensions, and materials of construction;
2. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;
3. Capacity of the containment system relative to the number and volume of containers to be stored;
4. Provisions for preventing or managing run-on; and
5. How accumulated liquids can be analyzed and removed to prevent overflow.

5.2.1.2. For container storage areas holding wastes that do not contain free liquids the Permittee shall maintain the following documentation on-site:

1. Test procedures and results or other documentation or information to show that the wastes do not contain free liquids;
2. A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids;
3. Sketches, drawings, or data demonstrating compliance with 40 CFR 264.176 (location of buffer zone [15 m {50 ft}] from facility's property line and containers holding ignitable or reactive wastes) and 40 CFR 264.177(c) (location of incompatible wastes in relation to each other), where applicable; and
4. Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with 40 CFR 264.17(b) and (c), and 264.175(a) and (b).

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 5 MIXED WASTE STORAGE UNIT	REVISION 7
--	---------------------------------------	------------

5.3. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- 5.3.1. The Permittee may store in containers any hazardous waste identified in Part A of the Permit Application, and other hazardous wastes as identified in NAC 444.843, including wastes containing polychlorinated biphenyls, subject to the terms of this Permit.
- 5.3.2. The Permittee may store hazardous waste in the TRU Pad Cover Building and TRU Pad container storage area up to the maximum volume of 23,000 m³ (814,000 ft³).
- 5.3.3. The Permittee shall not accept or manage any hazardous waste except as defined within the MWSU Permit Application. The MLLW is characterized and identified in Sections B.2 and B.3 of the MWSU Permit Application.
- 5.3.4. Aisle space shall be maintained as noted in the MWSU Permit Application Section B.8.f and shall be separated by a minimum aisle space of three (3) feet and containers shall be stored no more than two (2) high.
- 5.3.5. The Permittee shall not store any hazardous waste (whether accepted from off-site or generated on-site) that contains free liquids, as determined by the Paint Filter Test (EPA method 9095 in SW 846), in an area that does not have secondary containment.

5.4. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with MWSU Permit Application Section B.20.a.5. [40 CFR 264.171]

5.5. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is unimpaired, as detailed in MWSU Permit Application Section B.20.a.6. [40 CFR 264.172]

5.6. MANAGEMENT OF CONTAINERS

- 5.6.1. The Permittee shall keep all containers closed during storage or staging, except when it is necessary to visually inspect, add or remove waste, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak. [40 CFR 264.173]
- 5.6.2. The Permittee shall follow the container management practices in MWSU Permit Application Section B.20.a.7.

5.7. CONTAINMENT SYSTEMS

The Permittee shall construct and maintain the secondary containment systems in accordance with Part B MWSU Permit Application, Section B.20.a.9, and the requirements of 40 CFR 264.175.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 5 MIXED WASTE STORAGE UNIT	REVISION 7
--	---------------------------------------	------------

5.8. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect all container areas in accordance with the Inspection Schedule in Part B MWSU Permit Application, Section B.5, to detect leaking containers, improperly labeled containers, deterioration of containers and/or the containment system caused by corrosion and other factors.

5.9. RECORDKEEPING

5.9.1. The Permittee shall place the results of all waste analyses and inspections in the operating record.

5.9.2. The Permittee must document compliance with 40 CFR 264.17(a) and (b) and 264.177 in the facility operating record in accordance with General Facility Condition, Section 2.13.1.1.
[40 CFR 264.73]

5.10. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

5.10.1. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line as required by 40 CFR 264.176.

5.10.2. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste in accordance with 40 CFR 264.17(a).

5.11. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

5.11.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container as required by 40 CFR 264.177(a), unless the Permittee complies with 40 CFR 264.17(b).

5.11.2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material as required by 40 CFR 264.177(b).

5.11.3. The Permittee shall separate containers of incompatible wastes as required by 40 CFR 264.177(c).

5.12. CONTAINER LABELING REQUIREMENTS

The Permittee shall comply with the labeling requirements of 40 CFR 262.31 and 262.32, and NAC 444.8671.

5.13. CLOSURE

Upon closure of any of the container storage areas, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system or area as required by 40 CFR 264.178, and in accordance with the Closure Plan in MWSU Permit Application Section B.13.

5.14. COMPLIANCE SCHEDULE

Reserved

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 6 HAZARDOUS WASTE STORAGE UNIT	REVISION 7
--	---	------------

6. SUMMARY

The Permittee is allowed to store hazardous waste in containers subject to the terms and conditions of this Permit as described in this Section. Hazardous waste containers are managed in the areas noted in the Part B HWSU Permit Application, Section B.1. Both liquids and solids managed in containers are accepted and stored while awaiting treatment, disposal, or off-site shipment. The specific management requirements are specified below.

6.1. CONTAINER STORAGE

The hazardous waste container storage area is identified in Part B of the HWSU Permit Application, Section B.1. The maximum amount and type of hazardous wastes that may be handled are discussed below in Permit Condition 6.3.

6.2. CONTAINER-SPECIFIC INFORMATION TO BE MAINTAINED AT THE FACILITY

6.2.1. The Permittee shall maintain at the facility, until closure is completed for the hazardous waste container storage area and certified by a qualified professional engineer, the following container-specific documents and information and all amendments, revisions and modifications to these documents and information:

6.2.1.1. A description of the containment systems including:

1. Basic design parameters, dimensions, and materials of construction;
2. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;
3. Capacity of the containment system relative to the number and volume of containers to be stored;
4. Provisions for preventing or managing run-on; and
5. How accumulated liquids can be analyzed and removed to prevent overflow.

6.2.1.2. For the container storage area, the Permittee shall maintain the following documentation on-site:

1. A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids;
2. Sketches, drawings, or data demonstrating compliance with 40 CFR 264.176 (location of buffer zone [15m {50ft} from facility's property line] and containers holding ignitable or reactive wastes) and 40 CFR 264.177(c) (location of incompatible wastes in relation to each other), where applicable; and
3. Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with 40 CFR 264.17(b) and (c) and 264.175(a) and (b).

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 6 HAZARDOUS WASTE STORAGE UNIT	REVISION 7
--	---	------------

6.3. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- 6.3.1. The Permittee may store in containers any hazardous waste identified in Part A of the HWSU Permit Application, and other hazardous wastes as identified in NAC 444.843, including wastes containing polychlorinated biphenyls, subject to the terms of this Permit.
- 6.3.2. The Permittee may store hazardous waste in the container storage area up to the maximum volume of 61,600 L (16,273 gal).
- 6.3.3. The Permittee may store hazardous waste for up to one (1) year on the hazardous waste storage pad for the volume defined in 6.3.2. The Permittee shall not accept or manage any hazardous waste except as defined within the HWSU Permit Application. The hazardous waste is characterized and identified in Sections B.2 and B.3 of the HWSU Permit Application.
- 6.3.4. Aisle space shall be maintained as noted in the HWSU Permit Application Section B.8.f and shall be separated by a minimum aisle space of three (3) feet and containers shall be stored no more than two (2) high.
- 6.3.5. The Permittee shall not store any hazardous waste (whether accepted from off-site or generated on-site), which contains free liquids as determined by the Paint Filter Test (EPA method 9095 in SW 846), in an area that does not have secondary containment.

6.4. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with HWSU Permit Application Section B.20.c. [40 CFR 264.171]

6.5. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is unimpaired, as detailed in HWSU Permit Application Section B.20.b. [40 CFR 264.172]

6.6. MANAGEMENT OF CONTAINERS

- 6.6.2. The Permittee shall keep all containers closed during storage or staging, except when it is necessary to visually inspect, add or remove waste, and shall not open, handle, or store containers in a manner, which may rupture the container or cause it to leak. [40 CFR 264.173]
- 6.6.3. The Permittee shall follow the container management practices in HWSU Permit Application Section B.20.c.

6.7. CONTAINMENT SYSTEMS

The Permittee shall construct and maintain the secondary containment systems in accordance with HWSU Permit Application Section B.20 and the requirements of 40 CFR 264.175.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 6 HAZARDOUS WASTE STORAGE UNIT	REVISION 7
--	---	------------

6.8. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect all container areas in accordance with the Inspection Schedule in HWSU Permit Application Section B.5, to detect leaking containers, improperly labeled containers, deterioration of containers and/or the containment system caused by corrosion and other factors.

6.9. RECORDKEEPING

6.9.2 The Permittee shall place the results of all waste analyses and inspections in the operating record.

6.9.3 The Permittee must document compliance with 40 CFR 264.17(a) and (b) and 264.177 in the facility operating record in accordance with General Facility Condition 2.13.1.1. [40 CFR 264.73]

6.10. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

6.10.2 The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line as required by 40 CFR 264.176.

6.10.3 The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste in accordance with 40 CFR 264.17(a).

6.11. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

6.11.2 The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container as required by 40 CFR 264.177(a), unless the Permittee complies with 40 CFR 264.17(b).

6.11.3 The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material as required by 40 CFR 264.177(b).

6.11.4 The Permittee shall separate containers of incompatible wastes as required by 40 CFR 264.177(c).

6.12. CONTAINER LABELING REQUIREMENTS

The Permittee shall comply with the labeling requirements of 40 CFR 262.31 and 262.32, and NAC 444.8671.

6.13. CLOSURE

Upon closure of any of the container storage area(s), the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system or area, and in accordance with the Closure Plan in HWSU Permit Application Section B.13. [40 CFR 264.178]

6.14. COMPLIANCE SCHEDULE

Reserved

7 SUMMARY

The Permittee operates an explosive detonation unit for the treatment of explosive wastes, that are hazardous wastes as defined under 40 CFR 261.21, 261.23, 261.24, and 261.33. The EMU consists of a firing point (controlled access area where the firing of explosives is remotely initiated), detonation area surrounded by an earthen pad (location where explosives hazardous waste is fired), and a storage magazine. The Permittee is allowed to detonate a maximum of 45 kilograms [kg] (100 pounds [lbs]) of approved waste at a time, not to exceed one (1) detonation event per hour.

Type of unit: Open Detonation

Description of Detonation Area: Graded area approximately 20 m (66 ft) by 30 m (100 ft) and is free of any magazines or other materials. The detonation area is located on top of a small hill.

7.1. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

7.1.1. The Permittee may treat a maximum of 45 kg (100 lbs) of hazardous waste (per event, one [1] event per hour) listed below, in Table 7.1, subject to the terms of this Permit.

7.1.2. The Permittee may open detonate the following waste explosives, subject to the terms of this Permit:

Table 7.1

No.	Description of Hazardous Waste	EPA Waste No.
1	Commercially manufactured explosives (capable of detonation as described in 40 CFR 265.382)	D003 – D011
2	Blasting caps	D003 – D011
3	Black powder	D001, D003
4	Smoke pots (hexachloromethane)	D003, D034

7.1.3. Treatment Prohibitions

7.1.3.1. The Permittee is prohibited from treating hazardous waste that is not identified in Permit Condition 7.1.2.

7.1.3.2. The Permittee is prohibited from treating hazardous waste that is generated outside of DOE/NNSA/NFO or Department of Defense (DOD) NNSS activities. The DOE/NNSA/NFO shall notify the NDEP in an electronic submittal of any DOE/NNSA/NFO and/or DOD upcoming activities that are generating wastes requiring treatment at the EMU.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 7 EXPLOSIVES MANAGEMENT UNIT	REVISION 7
--	---	------------

7.1.3.3. The Permittee may submit a written request to treat explosives not identified in Table 7.1 (e.g., a Forbidden explosive, as defined in 49 CFR 173.54). The Permittee is prohibited from treating the explosives not identified in Table 7.1 until written approval by the NDEP is received by the DOE/NNSA/NFO.

7.2. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

7.2.1. Open detonation on an earthen pad.

7.2.1.1. Two (2) years after the effective date of this Permit and every five (5) years, Class III modification and/or renewal thereafter, the Permittee shall submit a report for NDEP’s approval on the status of alternative technologies to Open Burn and Open Detonation (OB/OD) that are appropriate for use at the EMU. The report shall include a certification that the information included is the best and most current information available to the Permittee.

7.2.1.2. The Permittee shall operate and maintain the open detonation area in accordance with the operating procedures contained in the EMU Part B Permit Application.

7.2.1.3. The Permittee shall operate and maintain the open detonation area in order to minimize air emissions or exposure of site personnel to toxic or hazardous emissions in accordance with Sections B.8 and B.20 of the EMU Part B Permit Application.

7.2.1.4. Within two (2) years of issuance of Revision 7 of this Permit, the Permittee shall submit a risk assessment report electronically to the NDEP.

7.2.1.5. Any residues (e.g., shrapnel, wire, casings) from the treatment of waste explosives visible on or around the detonation area shall be removed at the next site visit or inspection of the EMU.

7.3. HANDLING AND STORAGE REQUIREMENTS

7.3.1. The Permittee shall handle/manage explosive waste in accordance with Sections B.8 and B.20 of the EMU Part B Permit Application.

7.3.2. The Permittee shall store explosive wastes in accordance with Sections B.9 and B.20 of the EMU Part B Permit Application.

7.4. INSPECTION SCHEDULES AND PROCEDURES

7.4.1. The Permittee shall inspect the EMU, in accordance with EMU Part B Permit Application Section B.5.

7.5. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

7.5.1. The Permittee shall follow the procedures contained in B.9 of the EMU Part B Permit Application to prevent unintended ignition of wastes.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 7 EXPLOSIVES MANAGEMENT UNIT	REVISION 7
--	---	------------

7.6. MONITORING REQUIREMENTS

- 7.6.1. The EMU *2020 Soil Characterization Report for the Area 11 Explosives Ordnance Disposal Unit*, contained in Exhibit 3 of the EMU Part B Permit Application, and pursuant to the EMU Site Characterization Plan, as specified in Section B.20.i.2 of the EMU Permit Application, is hereby incorporated by reference as the existing site characterization data for the EMU.
- 7.6.2. The Permittee shall conduct a site characterization, prior to issuance of future renewals of the RCRA Permit, over the life of the unit and before closure of the unit.
- 7.6.3. The Permittee shall submit to the Director the analytical results for soil characterization within one (1) year of this Permit renewal and every five (5) years thereafter. The data shall be reported in a format agreed upon by the Director and Permittee.
- 7.6.4. The NDEP will make a determination regarding the applicability of residue management and/or subsurface monitoring based upon the results of the Area 11 EMU site characterization. If at any time, in the opinion of the NDEP, residue management and/or subsurface monitoring is required, the NDEP will modify the Permit to include additional management practices.

7.7. CLOSURE

- 7.7.1. At final closure of the EMU, the Permittee shall follow the procedures in the Closure Plan as described in Section B.13 of the EMU Part B Permit Application.
- 7.7.2. If, after closure, the Permittee finds that not all contaminated soils and debris can be removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the EMU and develop and implement a post-closure plan in accordance with the post closure care requirements of 40 CFR 264.603.

7.8. RECORDKEEPING

- 7.8.1. The Permittee shall develop and maintain all records required to comply with 40 CFR 264.73 and 264.602.
- 7.8.2. The permittee shall maintain a log of all wastes treated at the EMU in the Facility Operating Record. The log shall include a description of each waste treated which meets the 40 CFR 265.382 definition of waste explosive, with a reference to documentation demonstrating the waste meets the definition of a Class 1 Explosive, under 49 CFR 173 Subpart C.

7.9. COMPLIANCE SCHEDULE

Reserved

8. SUMMARY

The Permittee is required to conduct a Groundwater Detection Monitoring program in compliance with 40 CFR 264.97 and 40 CFR 264.98. The existence of closed and active hazardous waste RCRA landfill cells is grounds for requiring groundwater and leachate monitoring for RCRA Cells 18 and 25. The current groundwater detection monitoring system includes four (4) existing groundwater monitoring wells and two (2) leachate tanks. A new groundwater monitoring well (downgradient) will be constructed concurrent with the construction of any new RCRA cell. Leachate systems are also to be installed in any future RCRA cells.

Additional details of the Groundwater Detection Monitoring Program are included in the Mixed Waste Disposal Unit (MWDU) Part B Permit Application, Section C.1, Exhibit 11, Environmental Monitoring Plan Area 5 Radioactive Waste Management Site, Nevada National Security Site, Nevada.

8.1. POINT OF COMPLIANCE

The Point of Compliance (POC) is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units. All wells identified herein as POC wells or installed for that purpose subsequent to Permit issuance are considered reflective of the conditions at the Point of Compliance. For the purposes of determining whether the facility complies with the Groundwater Protection Standards established herein, any exceedance of the Groundwater Protection Standards identified in this section requires compliance with Permit Conditions and 40 CFR 264 Subpart F.

8.2. WELL LOCATION, INSTALLATION AND CONSTRUCTION

The Permittee shall install and maintain a groundwater monitoring system as required by 40 CFR 264.97 and as specified in the MWDU Part B Permit Application, Section C.1, and as summarized in the sections below:

8.2.1. The Permittee shall maintain groundwater monitoring wells at the locations specified in Figure 1 in the MWDU Part B Permit Application, Section C.1, Exhibit 11 - Environmental Monitoring Plan, and as noted in Table 8.1, below:

Table 8.1 Groundwater Monitoring Wells

Monitoring Well Identification	Designation
UE5PW-1	POC
UE5PW-2	Background
UE5PW-3	Background
UE5MW-4	POC

8.2.2. The Permittee shall obtain a permit modification for any new or replacement monitoring well.

8.2.3. Any wells deleted from the monitoring program shall be plugged and abandoned in accordance with NAC 534.420 and shall be decommissioned only upon prior approval of the Director. All well decommissioning methods and certification reports shall be submitted to the Director within sixty (60) days from the date any wells are approved to be removed from the monitoring program.

8.2.4. Any new or replacement monitoring wells shall be drilled and constructed as approved by the NDEP. For any new or replacement monitoring well, a well installation work plan shall be submitted to the Director for approval. The Permittee shall not begin drilling until NDEP approval has been granted. Any new or replacement monitoring well shall be designed, constructed, and installed in accordance with Nevada’s Monitoring Well Installation Regulations (NRS 445A.660, NAC 534); and, as appropriate, in general accordance with current guidance from the Director for drilling and construction of groundwater monitoring wells.

8.2.4.1. The Permittee shall take all reasonable precautions during drilling to prevent cross-contamination between the water-bearing hydrologic zone and the geologic zones overlying and underlying the hydrologic zone. [NAC 534]

8.2.5. As part of a Permit Modification, the Permittee shall submit to the Director within sixty (60) calendar days of installation of any new or replacement monitoring well, or decommissioning of an existing monitoring well, revised versions of Figure 1, and any other listing/description of the groundwater monitoring wells in Section C.1 and Exhibit 11 of the MWDU Part B Permit Application.

8.3. INDICATOR PARAMETERS AND MONITORING CONSTITUENTS

8.3.1. The Permittee shall monitor the wells described in Permit Condition 8.2, for the parameters and constituents listed below in Table 8.2. [40 CFR 264.98(a)]

8.3.2. All POC and background wells listed in Table 8.1 shall be sampled annually, for the parameters and constituents listed in Table 8.2; and sampled biennially for the constituent listed in Table 8.3.

Table 8.2 Annual Monitoring

Analyte	Groundwater Protection Standards ^a (mg/L) ^b
Metals^c	
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Selenium	0.01
Silver	0.05
Mercury	0.002
Semi-volatiles^d	
m-Cresol	200.0 ^e
o-Cresol	200.0 ^e
p-Cresol	200.0 ^e
Cresol	200.0 ^e
1,4-Dichlorobenzene	7.5
2,4-Dinitrotoluene	0.13 ^f
Hexachlorobenzene	0.13 ^f

Analyte	Groundwater Protection Standards ^a (mg/L) ^b
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Nitrobenzene	2.0
Pentachlorophenol	100.0
Pyridine	5.0 ^f
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2.0
Volatiles^d	
Benzene	0.5
Carbon tetrachloride	0.5
Chlorobenzene	100.0
Chloroform	6.00
1,2-Dichloroethane	0.50
1,1-Dichloroethylene	0.7
Methyl ethyl ketone	200.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5
Vinyl chloride	0.2
Pesticides^d	
Chlordane	0.03
Endrin	0.02
Heptachlor	0.008
Lindane	0.4
Methoxychlor	10.0
Toxaphene	0.5
Herbicides^d	
2,4,5-TP SILVEX (2,4,5-Trichlorophenoxypropionic Acid)	1.0
2,4-D (2,4-Dichlorophenoxyacetic Acid)	10.0
Indicator Parameters^g	
pH	<6.0 or >9.0
Specific Conductance	10.0 mmhos/cm ^h
Radioisotope	
Tritium	20,000 pCi/L ⁱ

^a Groundwater Protection Standards include regulatory standards and/or values established from background data.

^b mg/L = milligrams per liter

^c Groundwater Protection Standards are regulatory standards per 40 CFR 264.94(a)(2) Table 1.

^d Toxicity characteristic contaminants (40 CFR 261.24)

^e If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol concentration is used. The Groundwater Protection Standard of total cresol is 200 mg/l. [40 CFR 261.24(b), Table 1, Footnote 4]

^f Quantitation limit is greater than the calculated Groundwater Protection Standard. The quantitation limit therefore becomes the Groundwater Protection Standard. [40 CFR 261.24(b), Table 1, Footnote 3]

^g GWPS value was established from data obtained from 2012 to 2021.

^h mmhos/cm = millimhos per centimeter

ⁱ pCi/L = picocuries per liter

Table 8.3 Biennially Monitoring

Analyte	Groundwater Protection Standard ^a (mg/L) ^b
Indicator Parameter	
Total Organic Carbon (TOC)	5.0
Total Organic Halide (TOX)	0.1

^a GWPS value was established from data obtained from 2012 to 2022.

^b mg/L = milligrams per liter

- 8.3.3. Should sample results exceed the Groundwater Protection Standard for any contaminant identified in Table 8.2 and/or Table 8.3, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of completing the data validation. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request. The well will be resampled to collect a confirmatory sample, and the analysis repeated within one (1) month of receiving the result.
- 8.3.4. Should confirmatory sample results exceed the Groundwater Protection Standard for any contaminant identified in Table 8.2 and/or Table 8.3, the Permittee will notify the NDEP within ten (10) days of completing the data validation in a written letter, submitted electronically. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request.

8.4. LEACHATE INDICATOR PARAMETERS AND MONITORING CONSTITUENTS

- 8.4.1. The Permittee must collect samples within fourteen (14) days of transferring leachate to the leachate collection tank(s) and it must be analyzed for the analytes listed in Tables 8.4 and 8.5 (below), and in Exhibit 11 in Part B of the MWDU Permit Application.
- 8.4.2. The Permittee may use collected leachate that does not exceed Groundwater Protection Standards for any contaminants identified in Tables 8.4 and 8.5 for dust suppression on the cell from which it was generated within sixty (60) days of the initial transfer of leachate to the leachate collection tank(s).
- 8.4.3. Should sample results from leachate collected in the storage tank(s) exceed the Groundwater Protection Standards for any contaminant identified in Table 8.4, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of completing the data validation. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request. The tank will be resampled to collect a confirmatory sample, and the analysis repeated within one (1) month of receiving the result.

8.4.4. Should confirmatory sample results from leachate collected in the storage tank(s) exceed the Groundwater Protection Standards for any contaminant identified in Table 8.4, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of completing the data validation. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request. The leachate will not be allowed for dust suppression and must be treated and disposed of as hazardous waste.

Table 8.4 Leachate Monitoring

Analyte	Groundwater Protection Standards ^a (mg/L) ^b
Metals	
Arsenic	1.4
Barium	1.2
Cadmium	0.69
Chromium	2.77
Lead	0.69
Selenium	0.82
Silver	0.43
Mercury	0.15
Semi-volatiles	
m-Cresol	0.77
o-Cresol	0.11
p-Cresol	0.77
2,4-Dinitrotoluene	0.32
Hexachlorobenzene	0.055
Hexachlorobutadiene	0.055
Hexachloroethane	0.055
Nitrobenzene	0.068
Pentachlorophenol	0.089
Pyridine	0.014
2,4,5-Trichlorophenol	0.18
2,4,6-Trichlorophenol	0.035
Volatiles	
Benzene	0.14
Carbon tetrachloride	0.057
Chlorobenzene	0.057
Chloroform	0.046
1,2-Dichloroethane	0.21
1,1-Dichloroethylene	0.025
Methyl ethyl ketone	0.28
Tetrachloroethylene	0.056
Trichloroethylene	0.054
Cyanides (Total)	1.2
Acetonitrile	5.6
1,4-Dioxane	12

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 8 GROUNDWATER DETECTION MONITORING	REVISION 7
--	---	------------

Analyte	Groundwater Protection Standards ^a (mg/L) ^b
Pesticides	
Chlordane (alpha and gamma isomers)	0.0033
Endrin	0.0028
Heptachlor	0.0012
Methoxychlor	0.25
Toxaphene	0.0095
Herbicides	
2,4,5-TP SILVEX (2,4,5-Trichlorophenoxypropionic Acid)	0.72
2,4-D (2,4-Dichlorophenoxyacetic Acid)	0.72
Indicator Parameters^c	
pH	≤ 2.5 or ≥ 12.5
Toxic Substances Control Act^d	
Total Polychlorinated Biphenyl (PCB)	0.1

^aGroundwater Protection Standards based on F039 Land Disposal Restriction (LDR) Standards (§ 268.40 Applicability of treatment standards)

^b mg/L = milligrams per liter

^c GWPS value was established from leachate data obtained from 2012 to 2021.

^d Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).

Table 8.5 Leachate Radioisotope Monitoring

Analyte	Groundwater Protection Standards ^a (pCi/L) ^b
Radioisotope	
Tritium	200,000

^a GWPS value was established from leachate data obtained from 2012 to 2021.

^b pCi/L = picocuries per liter

8.4.5. Should sample results from leachate collected in the storage tank(s) exceed Groundwater Protection Standards for the radionuclide identified in Table 8.5, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of completing the data validation. The notification will include a summary of the laboratory report containing the analytical results from the sample which showed the exceedance; a copy of the laboratory report shall be made available upon request. The storage tank will be resampled to collect a confirmatory sample, and the analysis repeated within one (1) month of receiving the result.

8.4.6. Should confirmatory sample results from leachate collected in the storage tank(s) exceed Groundwater Protection Standards for the radionuclide identified in Table 8.5, the Permittee will notify the NDEP in a written letter report, submitted electronically, within thirty (30) days of completing the data validation. The notification will include a preliminary investigation plan, schedule, and path forward.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 8 GROUNDWATER DETECTION MONITORING	REVISION 7
--	---	------------

8.4.7. Should Tritium sample results from leachate collected in the storage tank(s) exceed the established Area 5 worker safety limit of 1,330,000 pCi/L, the Permittee will notify the NDEP in a written letter, submitted electronically, within ten (10) days of discovering the exceedance. The storage tank will be resampled to collect a confirmatory sample, and the analysis repeated within one (1) month of receiving the result.

8.4.8. Should confirmatory tritium sample results from leachate collected in the storage tank(s) exceed 1,330,000 pCi/L, the leachate will not be allowed for dust suppression. The Permittee will notify the NDEP in a written letter report, submitted electronically, within ten (10) days of completing the data validation. The notification will include a preliminary investigation plan, schedule, and path forward.

8.5. SAMPLING AND ANALYSIS PROCEDURES

The groundwater monitoring program must include sampling and analysis procedures that accurately measure hazardous constituents in groundwater and leachate, and that are designed to ensure monitoring results that provide a reliable indication of the presence of hazardous constituents in groundwater below the hazardous waste management area. The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the groundwater monitoring wells and leachate tanks:

8.5.1. Samples shall be collected using the techniques described in the Environmental Monitoring Plan in MWDU Part B Permit Application, Section C.1, Exhibit 11.

8.5.2. Samples shall be preserved and shipped (when shipped off-site for analysis), in accordance with the procedures specified in the Environmental Monitoring Plan in MWDU Part B Permit Application, Section C.1, Exhibit 11.

8.5.3. Samples shall be analyzed in accordance with the procedures specified in the Environmental Monitoring Plan in MWDU Part B Permit Application, Section C.1, Exhibit 11.

8.5.4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in the Environmental Monitoring Plan in MWDU Part B Permit Application, Section C.1, Exhibit 11.

8.5.5. Field sampling equipment shall be calibrated in accordance with the manufacturer’s guidelines for each piece of equipment. Manufacturer’s guidelines for each field-sampling device shall be maintained at the facility. The calibration data shall be recorded and maintained as part of the operating record of the facility.

8.6. ELEVATION OF THE GROUNDWATER SURFACE

8.6.1. The Permittee shall determine the elevation of the groundwater surface at each well, each time the groundwater is sampled, in accordance with 40 CFR 264.97(f).

8.6.2. The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually in accordance with the 40 CFR 264.98(e).

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 8 GROUNDWATER DETECTION MONITORING	REVISION 7
--	---	------------

- 8.6.3. For any new or replacement monitoring wells, the Permittee shall record, with as-built drawings, the total depth of the well and the elevations of the following:
1. Top of the casing;
 2. Ground surface and/or apron; and
 3. Protective casing.

8.7. RECORDKEEPING AND REPORTING

- 8.7.1. The Permittee shall enter all field equipment calibration data, monitoring, testing, and analytical data obtained into the operating record.
- 8.7.2. The Permittee shall submit to the Director the annual analytical and field data results for groundwater and leachate monitoring from the previous calendar year by May 31 of each year. The data shall be reported in graphical, tabular and electronic file format as approved by the Director.

8.8. REQUEST FOR PERMIT MODIFICATION

If the Permittee or the Director determines that the Groundwater Detection Monitoring program no longer satisfies the requirements of the regulations, the Permittee must, within ninety (90) days of the determination, submit an application for a permit modification, in accordance with Permit Condition 1.2.1, to make any appropriate changes to the program which will satisfy the regulations. [40 CFR 264.98(h)]

9. SUMMARY

Currently, vadose zone monitoring is being conducted in closed RCRA cell(s) and/or Corrective Action Units (CAUs), however, there is no requirement for vadose zone monitoring in 40 CFR 264. [Refer to Section 10 – Post-Closure Conditions for background information on CAUs and closed cell(s).] This monitoring provides additional assurance that the engineered covers of the CAUs, Cell 18 and Pit 3 are working as designed, and any future contaminant migration through the vadose zone toward the groundwater will be detected. If there is an indication of movement of contamination through the vadose zone, or potential groundwater contamination, the monitored groundwater parameters may be expanded at that time.

9.1. TIME-DOMAIN REFLECTOMETRY (TDR) NETWORK LOCATION, INSTALLATION AND CONSTRUCTION

The Permittee shall install and maintain a vadose zone monitoring system as specified in the MWDU Part B Permit Application, Section C.1, Exhibit 11, and as summarized below:

- 9.1.1. The Permittee shall utilize a representative number of TDRs at the locations listed in Table 9.1, below:

Table 9.1 Time-Domain Reflectometry

Type of Waste Unit		Unit Name
1	Landfill	Cell 18
2	Landfill	CAU 577
3	Landfill	CAU 111
4	Landfill	CAU 110
5	Landfill	Pit 3

- 9.1.2. Vadose zone stations, consisting of vertically arranged TDR probes, will be installed in each cover at depths from 0.15 meters (m) [0.5 foot (ft)] to 1.83 m (6 ft).
- 9.1.3. The most current, acceptable technology for vadose zone monitoring is identified in Table 9.2 (below); however, it is expected that improved technology may be available in the future. If the monitoring steps identified in Table 9.2, after Step 1: Base Monitoring, are required to be implemented, the technology available at that time will be evaluated and may be used in lieu of those described in Table 9.2.
- 9.1.4. The Permittee shall submit, electronically, a written letter notification of installation of any new or replacement TDR(s) to the Director within sixty (60) calendar days.

9.2. COMPLIANCE CRITERIA

If, at any time, a trigger condition for vadose zone monitoring, as identified in Table 9.2, is exceeded, vadose zone monitoring will progress to the next step.

Table 9.2 Progressive Approach for Vadose Zone Monitoring

Progressive Monitoring Step	Description	Baseline/Acceptable Condition	Trigger Condition for Progressing to the Next Step
Step 1: Base Monitoring	TDR and lysimeter monitoring network	No indication of contaminant migration beneath the waste zone	Volumetric water content greater than 30 percent ^a for two (2) consecutive years at the deepest TDR probe location
Step 2: Expanded Soil Moisture Monitoring Beneath the Waste Zone	Drill borehole for neutron probe monitoring or install TDR probes adjacent to waste cells to a depth of approximately 10 ft beneath the waste zone	No indication of contaminant migration beneath the waste zone	Volumetric water content greater than 30 percent for two (2) consecutive years at the deepest TDR probe location
Step 3: Soil Sampling for Contaminants Beneath the Waste Zone	Collect soil samples at approximately 10 ft below the waste zone near the location(s) exceeding the trigger condition in Step 2 and analyze for RCRA toxicity characteristic contaminants and radionuclides, or other contaminants, as agreed upon by NDEP	No contaminants detected above TCLP or radionuclide action levels in the soil beneath the waste zone	Contaminants detected in soil sample above TCLP or radionuclide action levels (after background comparison)
Step 4: Deep Vadose Zone Monitoring	Install heat dissipation probes at approximately 30 ft increments to approximately 300 ft bgs at one location outside the Area 5 RWMS to measure the water potential vertical gradient	No downward movement of water in the deep vadose zone	Trend of downward movement of water in the deep vadose zone for two (2) consecutive years
Step 5: Expanded Groundwater Monitoring	Install additional groundwater monitoring well(s) at location(s) agreed upon by NDEP	No contaminants or indicators of contamination detected in the groundwater	Groundwater is the point of compliance. Indicators of contamination that exceed the limits listed in Section 8, Tables 8.2 and 8.3, will be reported to NDEP within ten (10) days of discovery

^a A volumetric water content of 30 percent is a conservative field capacity value for the soil in this area.

RCRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 9 VADOSE ZONE MONITORING	REVISION 7
--	-------------------------------------	------------

9.2.1. The Permittee shall notify the NDEP in a written letter, submitted electronically, within fourteen (14) days of determining that the averaged water content of the three (3) deepest TDR probes is greater than 32 percent volumetric moisture content for a continuous 6-month period.

9.3. RECORDKEEPING AND REPORTING

9.3.1. The Permittee shall measure the moisture content data from the TDR probes daily and store the data on a data logger.

9.3.2. The Permittee shall download the data periodically using a radio to intranet connection.

9.3.3. The Permittee shall submit to the Director annual vadose zone monitoring data from the previous calendar year by May 31 of each year. The data shall be reported in the Environmental Monitoring Report in graphical, tabular, and electronic file format, as approved by the Director.

10. SUMMARY

This section of the Permit pertains to the post-closure care required for the closed RCRA cell(s) and/or CAUs at the NNSS, as listed in Table 10.1. The post-closure care for each hazardous waste unit/pit/cell (managed units) shall continue for thirty (30) years after closure date, and shall include monitoring, reporting and maintenance. [40 CFR 264.117, 264.310]

10.1. UNIT IDENTIFICATION

The Permittee shall provide post-closure care for the managed units listed below in Table 10.1, subject to the terms and conditions of this Permit, and as described in the following sections:

Table 10.1 Managed Units

Type of Waste Unit		Unit Name	Waste Description	Date of Certification of Closure
1	Landfill	Cell 18	RCRA	08/17/2021
2	Landfill	CAU 577 ^a	RCRA	07/14/2021
3	Landfill	CAU 112 ^b	RCRA	10/12/1993
4	Landfill	CAU 111 ^b	RCRA	01/31/2012
5	Landfill	CAU 110 ^b	RCRA	06/07/2001
6	Landfill	CAU 92 ^b	RCRA	04/14/1999
7	Landfill	CAU 91 ^b	RCRA	03/27/1995
8	Landfill	CAU 90 ^b	RCRA	12/19/1996
9	Landfill	Pit 3	RCRA	01/31/2012

^a Closed under the Settlement Agreement (SA) executed between the Nevada Division of Environmental Protection and the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office on April 25, 2019. CAU 577 consists of five (5) Corrective Action Sites (CASs) of which four (4) are closed and one (1) is scheduled to be closed in 2023.

^b Historic CAUs closed under the Federal Facility Agreement and Consent Order, May 1996, as amended.

10.2. SUMMARY OF MANAGED UNITS

10.2.1. Settlement Agreement (CAU 577)

In March 2016, Nuclear Fuel Services, Inc. (NFS), a waste generator approved to ship waste to the NNSS, notified the DOE/NNSA/NFO that low-level waste (LLW) disposed at the RWMS, in Area 5 of the NNSS, potentially did not meet NNSS Waste Acceptance Criteria disposal requirements.

NFS performed an investigation and determined that between 2009 and 2015, NFS sent 48 shipments of waste to the Area 5 RWMS for disposal that should have been characterized as MLLW. These shipments included waste that contained chromium in excess of the toxicity characteristic leaching procedure (TCLP) regulatory limit of 5.0 milligrams per liter (mg/L), which would require the waste to carry EPA hazardous waste code D007. NFS estimated a total of 15 kilograms of chromium was present in 93 containers that were shipped to the NNSS for disposal.

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---------------------------------------	------------

On April 25, 2019, a Settlement Agreement (SA) that identified mitigation measures was executed between the NDEP and NNSA/NFO. The SA required that the chromium-containing waste received from NFS would be addressed following the closure process laid out in the Federal Facility Agreement and Consent Order (FFACO), which implements the corrective action requirements of Title 40 Code of Federal Regulations (CFR) Part 264.101, Corrective Action for Solid Waste Management Units. While not a legacy site on the NNSS, the units with the chromium-containing waste were required to be closed following a FFACO-like process to ensure proper closure and documentation of that closure.

10.2.2. RCRA Corrective Action Units

In 1995, the NDEP issued a RCRA permit to the DOE under the authority of Section 3006 of RCRA (40 Code of Federal Regulations [CFR] Part 271), Nevada Revised Statutes (NRS) 459.520, and Nevada Administrative Code (NAC) 444.842 through 444.8746 and 444.960 for the operation of hazardous waste facilities and to address contaminated sites from historical activities.

At the time of issuance, the Permit was for operating the Nevada Test Site (NTS; now the NNSS) Hazardous Waste Storage Unit and Area 11 Explosive Ordnance Disposal Unit (now the Explosives Management Unit – EMU). Through the subsequent years, it has been expanded to include additional operational units as approved through the RCRA permit modification process.

Under the RCRA permitting process (40 CFR 264.101), facilities receiving a RCRA permit for a Hazardous Waste Management Facility must institute corrective actions necessary to protect human health and the environment from all releases of hazardous waste or hazardous constituents at the facility, regardless of the time the waste was placed in the unit. The permit also must specify corrective actions or establish a schedule of compliance for corrective actions if they cannot be completed prior to permit issuance. The FFACO was developed in response to this requirement and provides the basis for developing corrective actions and schedules, identifying additional sites, and securing funding to address the corrective actions.

To comply with the RCRA corrective action and post-closure monitoring requirements, the Permit either lists specific units (CAUs), or follows the corrective action process described in the FFACO for any newly identified historical contamination (i.e., all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit).

However, upon the issuance of the Permit, nine historical hazardous waste management units, with assigned CAU numbers, that were either closed or in the process of closure were listed in, and regulated by, the Permit. Since the issuance of the Permit, additional hazardous waste management units have been added and will continue to be regulated by the Permit, though they may not have an assigned CAU number. Post-closure monitoring requirements associated with these hazardous waste management units are specified in the Permit, and any changes to the monitoring requirements must go through the RCRA permit modification process.

The Permittee has closed the nine CAUs previously identified in the RCRA Permit. Three of the nine CAUs (CAU 93, 94 and 109) have been "clean closed" with no post-closure monitoring. The remaining six CAUs are described below and have post-closure monitoring requirements.

10.2.2.1. Area 2 Bitcutter Shop and Postshot Containment Shop Injection Wells (CAU 90)

Two injection wells and one sump were used at the Area 2 Bitcutter and Postshot Containment Shops for disposal of fluids related to shop activities. One well and the sump are associated with the Bitcutter Shop, and one well was used at the Postshot Containment Shop. The Bitcutter Shop Inside Injection Well was constructed in 1981 and was located in the center of the floor of the building. It received water and solvents from drill bit and cutter washings from 1981 to approximately 1984. Wastes generated at the shop include RCRA listed solvents and hydrocarbon-based products. The fluids were dumped into the sump which drained into the injection well having an approximate 0.5-meter (m) [1.7 feet (ft)] diameter steel casing extending to a depth of 14 m (46 ft) below ground surface (bgs). The sump measures approximately 1.3 m (4.4 ft) in diameter and is 0.9 m (3 ft) deep. In February 1995, the Bitcutter and Postshot Containment Shop buildings were removed from their respective concrete slabs as part of the Demolition and Salvage of the Area 2 Camp. The concrete slabs were removed in April 1996. The Area 2 Bitcutter Shop was closed in April 1999.

10.2.2.2. Area 3 U-3fi Injection Well (CAU 91)

The U3fi Waste Unit was an abandoned emplacement hole located in Area 3 of the NNSS. It was drilled between March 27 and April 24, 1967, for emplacement of a nuclear testing device for the Los Alamos National Laboratory. Due to subsurface conditions, the hole caved, with the top of the collapsed emplacement hole located at approximately 73.2 m (240 ft) bgs. The U3fi abandoned emplacement hole was established as a waste disposal unit in 1970 and operated until November 1989. The U3fi Waste Unit was closed in March 1995.

10.2.2.3. Area 6 Decontamination Facility Evaporation Pond (CAU 92)

The Decontamination Pond was constructed and became operational in 1979. It is a square unit, approximately 61 m (200 ft) long on each interior side with perimeter berms 1.5 m (5 ft) above surrounding grade. A discharge pipe from the Decontamination Pad oil/water separator enters the pond on the southwest side approximately 0.3 m (1 ft) above the base of the pond. The pond is unlined and is surrounded by an earthen berm on all four (4) sides with a two-to-one grade.

The Decontamination Pond was used for the disposal of partially treated liquid effluent discharged from Buildings 6-605 (Decontamination Facility) and 6-607 (Industrial Laundry). Effluent from Buildings 6-605 and 6-607 was piped into the Decontamination Pad Oil/Water Separator which is the boundary between the Decontamination Facility and the Decontamination Pond. Waste was piped from the separator to the Decontamination Pond.

10.2.2.4. Area 3 U-3ax/bl Subsidence Crater (CAU 110)

The U-3ax/bl Subsidence Crater is a historic disposal unit within the Area 3 RWMS, located on the NNSS. The unit, which was formed by excavating the area between two subsidence craters (U-3ax and U-3bl), began disposal operations in July 1968, and was operationally closed in December 1987. The U-3ax/bl Subsidence Crater was closed in June 2001.

10.2.2.5. Retired Mixed Waste Pits and Trenches (CAU 111)

CAU 111 consists of two (2) mixed waste disposal pits and eight (8) mixed waste trenches. Much of the mixed waste disposed in the pits and trenches were disposed prior to the promulgation of RCRA.

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---------------------------------------	------------

10.2.2.6. Area 23 Hazardous Waste Trenches (CAU 112)

The Area 23 landfill operated for 25 years and was closed in October 1993.

10.2.3. Interim Status Unit

Pit 3 was an active RCRA disposal pit from 1985 to 2012. The NDEP granted interim status and issued the RCRA Permit in May 1995, under Title 40 Code of Federal Regulations (CFR) 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities. Pit 3 MWDU operated under interim status until its closure in 2012. Pit 3 was closed in accordance with CFR 265, as adopted by NAC 444.8632, Compliance with Federal Regulations Adopted by Reference.

10.2.4. Cell 18

Cell 18 was an active RCRA disposal Cell from 2011 until its closure in 2021. Cell 18 was permitted under the NDEP-issued RCRA Permit NEV HW0101. Cell 18 was closed in accordance with Title 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, as adopted by NAC 444.8632, Compliance with Federal Regulations Adopted by Reference.

10.3. **POST-CLOSURE PROCEDURES AND USE OF PROPERTY**

- 10.3.1. The Permittee shall conduct post-closure care for each hazardous waste management unit listed in Table 10.1, above, to begin after completion of closure of the unit and continue for thirty (30) years after the date of closure of that unit. The 30-year post-closure care period may be shortened upon application and demonstration approved by the Director that the facility is secure or may be extended by the Director if he/she finds this is necessary to protect human health and the environment. [40 CFR 264.117(a)]
- 10.3.2. The Permittee shall maintain the groundwater monitoring system as required by this Permit and comply with all other applicable requirements of 40 CFR Part 264 Subpart F during the post-closure period.
- 10.3.3. The Permittee shall conduct vadose zone monitoring (moisture migration monitoring system) using a lysimeter and/or time-domain reflectometry (TDR) system in accordance with requirements in Section 9 of this Permit. Data from this monitoring will be used by the Director to assess the need for similar monitoring and/or design adjustments for current and/or future final covers.
- 10.3.4. The Permittee shall comply with all security requirements, preventing access to closed units, as specified in Section B.4 of the Permit Application. [40 CFR 264.117(b)]
- 10.3.5. The Permittee shall not allow any use of the units designated in Permit Condition 10.1 which will disturb the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems during the post-closure care period.
[40 CFR 264.117(c)]

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---	------------

10.4. **INSPECTIONS**

10.4.1. The Permittee shall inspect the components, structures, and equipment (e.g., fences, gates, signs) and conduct any monitoring, as required at each unit, cell and/or pit, in accordance with Tables 10.2 and 10.3 of this section. [40 CFR264.117(a)(1)(ii) and 264.310(b)]

Table 10.2 Managed Units Inspection Frequency

CAU/Cell	Inspection Frequency
CAU 90; CAU 91; CAU 112	Annually
CAU 92; CAU 110	Biannually
CAU 111; CAU 577; Cell 18; Pit 3	Quarterly

Table 10.3 Managed Units Inspection Criteria

ACTIVITY	REQUIREMENT	COMPLIANCE CRITERIA AND ACTIONS	CAU/Cell
Visual Inspections	Visual inspections of warning signs, and covers for cracks, animal burrows, subsidence, or erosion at the frequency listed in Table 10.2.	<p>Cracks or settling imperfections greater than 6 inches (in.) deep that extend 3 feet (ft.) or more on the cover (through animal burrows, erosion, or subsidence) will be reported to NDEP in a verbal and/or electronic notification within 14 days and repaired within 60 days of discovery.</p> <p>Cracks or settling imperfections less than 6 in. deep that extend less than 3 ft. on the cover (through animal burrows, erosion, or subsidence) will be identified and repaired on an annual basis.</p> <p>Damaged or missing Use Restriction (UR) warning signs will be repaired or replaced within 60 days of discovery. Evidence of human intrusion into the covers will be reported to NDEP immediately upon discovery.</p>	CAU 111; CAU 112; CAU 577; Cell 18; and Pit 3
	Visual inspections of fencing, warning signs, and covers for cracks, animal burrows, subsidence, or erosion at the frequency listed in Table 10. 2.	<p>Cracks or settling imperfections greater than 6 in. deep that extend 3 ft. or more on the cover (through animal burrows, erosion, or subsidence) will be reported to NDEP in a verbal and/or electronic notification within 14 days and repaired within 60 days of discovery.</p> <p>Cracks or settling imperfections less than 6</p>	CAU 90; CAU 91; CAU 92; and CAU 110

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---	------------

ACTIVITY	REQUIREMENT	COMPLIANCE CRITERIA AND ACTIONS	CAU/Cell
		<p>in. deep that extend less than 3 ft. on the cover (through animal burrows, erosion, or subsidence) will be identified and repaired on an annual basis.</p> <p>Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery. Evidence of human intrusion into the covers will be reported to NDEP immediately upon discovery.</p>	
	Inspections for ponding and erosion after precipitation events in excess of 1.0 inch in a 24-hour period.	<p>Cracks or settling imperfections greater than 6 in. deep that extend 3 ft. or more on the cover (through animal burrows, erosion, or subsidence) will be reported to NDEP in a verbal and/or electronic notification within 14 days and repaired within 60 days of discovery.</p> <p>Cracks or settling imperfections less than 6 in. deep that extend less than 3 ft. on the cover (through animal burrows, erosion, or subsidence) will be identified and repaired on an annual basis.</p> <p>Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery. Evidence of human intrusion into the covers will be reported to NDEP immediately upon discovery.</p>	CAU 90; CAU 91; CAU 92; CAU 110; CAU 111; CAU 112; CAU 577; Cell 18; and Pit 3
Subsidence Surveys	Land surveys of subsidence monuments	<p>Significant subsidence will be reported to NDEP in a verbal and/or electronic notification within 14 days and repaired within 60 days of discovery.</p> <p>The condition of the subsidence survey markers will be inspected.</p> <p>On a biennial (every two years) basis, all survey markers will be resurveyed to determine if the cover has subsided.</p>	CAU 110; CAU 111; CAU 577; Cell 18; and Pit 3

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---	------------

ACTIVITY	REQUIREMENT	COMPLIANCE CRITERIA AND ACTIONS	CAU/Cell
Vegetation Surveys	Annual assessments by an ecological specialist or biologist	<p>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.</p> <p>Recommendations made by ecological specialist or biologist will be implemented.</p>	CAU 110 ^a ; CAU 111; CAU 577; Cell 18; and Pit 3
Groundwater Monitoring	Groundwater levels measured annually, and groundwater samples analyzed annually and/or biennially, as required, for analytes listed in Tables 8.2 and 8.3 of this Permit.	Groundwater indicators of contamination that exceed the limits listed in Tables 8.2 and 8.3, in Section 8 of this Permit, or water chemistry parameters that exceed the Groundwater Protection Standards will be reported to NDEP in a written letter submitted electronically within 14 days of discovery.	CAU 111; CAU 577; Cell 18; and Pit 3
Leachate Monitoring	<p>Record the leachate levels in the sumps at least monthly.</p> <p>If the leachate stays below the pump operating levels for two consecutive months, record the leachate levels in the sumps at least quarterly.</p> <p>If the leachate stays below the pump operating levels for two consecutive quarters, record the leachate levels in the sumps at least semi-annually.</p> <p>Samples must be collected within fourteen (14) days of transferring leachate to the leachate collection tank(s) and analyzed for the analytes listed in Tables 8.4 and 8.5 of this Permit, and in Exhibit 11 in Part B of the MWDU Application.</p>	<p>If a pump operating level is exceeded on quarterly or semi-annual recording schedules, monthly recording of amount of leachate removed from each sump will resume.</p> <p>If any sample result exceeds any Groundwater Protection Standards listed in Tables 8.4 and 8.5 of this Permit, NDEP will be notified in a written letter submitted electronically within 10 calendar days of discovering the exceedance, and the contents of the tank will be managed as hazardous waste.</p> <p>If no Groundwater Protection Standards are exceeded in the sample results, the contents of the tank may be used as dust suppression on the surface of the Cell 18 soil cover.</p>	Cell 18

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---	------------

ACTIVITY	REQUIREMENT	COMPLIANCE CRITERIA AND ACTIONS	CAU/Cell
Vadose Zone Monitoring	TDR probe and lysimeter data	Notify NDEP in a written letter submitted electronically within 14 days of determining that the averaged water content of the three deepest TDR probes (6 ft., 7 ft. and 8 ft.) is greater than 32 percent of the volumetric moisture content for a continuous 6-month period.	CAU 110; CAU 111; CAU 577; Cell 18; and Pit 3

^a Vegetation monitored annually, and survey conducted every 5 years.

10.4.2. All repair work should preserve the original cover "as-built" design. If the cover repair requires modification of the cover design, NNSA/NFO will present a formal design modification request to the NDEP prior to making the design modification.

10.5. **REPORTING**

10.5.1. 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
- f. Recommendations and conclusions.

10.6. **NOTICES AND CERTIFICATION**

10.6.1. No later than sixty (60) days after Certification of Closure of each permitted hazardous waste disposal unit, the Permittee shall submit to the Director a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed before January 12, 1981, the Permittee shall identify the type, location, and quantity of the hazardous wastes using the best available knowledge and in accordance with any records that have been kept. [40 CFR 264.119(a)]

10.6.2. Within sixty (60) days of Certification of Closure of the first and last hazardous waste disposal units, the Permittee shall: [40 CFR 264.119(b)]

1. Record, in accordance with Nevada law, a notation on the deed to the facility property or on some other instrument that is normally examined during the title search that will in perpetuity notify any potential purchaser of the property that:
 - i. The land has been used to manage hazardous wastes;
 - ii. Its use is restricted under 40 CFR Part 264 Subpart G regulations; and
 - iii. The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility have been filed with the Director and the local zoning authority with jurisdiction over local land use.

CRA PERMIT NEV HW0101 US DOE NNSS EPA ID# NV3890090001	SECTION 10 POST-CLOSURE CONDITIONS	REVISION 7
---	---------------------------------------	------------

2. Submit a certification to the Director, signed by the Permittee, that he/she has recorded the notation specified in Permit Condition 10.6.2., including a copy of the document in which the notation has been placed.

10.6.3. If the Permittee or any subsequent owner or operator of the land upon which the hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then he/she shall request a modification to the Permit in accordance with the applicable requirements in 40 CFR Parts 124 and 270. The Permittee or any subsequent operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of 40 CFR 264.117(c). [40 CFR 264.119(c)]

10.6.4. No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit and cell, the Permittee shall submit to the Director, by registered mail, a certification that the post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications in the approved Post-Closure Care Plan. The certification must be signed by the Permittee and an independent Nevada-registered Professional Engineer. Documentation supporting the qualified Professional Engineer's certification must be furnished to the Director upon request until the Director releases the Permittee from the financial assurance requirements for post-closure care under 40 CFR 264.145(i). [40 CFR 264.120]

10.7. COST ESTIMATE FOR FACILITY POST-CLOSURE CARE

States and the Federal government are exempt from the requirements of 40 CFR Part 264 Subpart H, 264.140(c).

10.8. FINANCIAL ASSURANCE FOR FACILITY POST-CLOSURE CARE

States and the Federal government are exempt from the requirements of 40 CFR Part 264 Subpart H, 264.140(c).

10.9. POST-CLOSURE PERMIT MODIFICATIONS

The Permittee must request a permit modification to authorize a change in the approved Post-Closure Care Plan. This request must be in accordance with applicable requirements of Permit Condition 1.2 and must include a copy of the proposed amended Post-Closure Care Plan for approval by the Director. The Permittee shall request a permit modification whenever changes in operating plans or facility design affect the approved Post-Closure Care Plan, there is a change in the expected year of final closure, or other events occur during the active life of the facility that affect the approved Post-Closure Care Plan. The Permittee must submit a written request for a permit modification at least sixty (60) days prior to the proposed change in facility design or operation, or no later than sixty (60) days after an unexpected event has occurred which has affected the Post-Closure Care Plan. [40 CFR 264.118(d)]

The following documents are adopted herein as if fully set forth in this Permit:

1. Engineering Report for Cell 18, Revision 0, June 2010, Andrews Engineering, Inc.
2. Specifications for Cell 18, Revision 0, June 2010, Andrews Engineering, Inc.
3. Engineering Report for Cell 25, Revision 0, November 2016, CTI and Associates, Inc.
4. Construction Specifications for Cell 25, Revision 0, November 2016, CTI and Associates, Inc.
5. Report of Construction Quality Assurance NNSS - Area 05A, Radioactive Waste Management Complex, Mixed Waste Disposal Unit Cell 25, March 2018.
6. Agreement in Principle, June 2021, including all attachments contained therein.
7. RCRA Part A Permit Application for Waste Management Activities at the Nevada National Security Site, January 2023.
8. RCRA Part B Permit Application for Waste Management Activities at the Nevada National Security Site, January 2023. Explosives Management unit and Hazardous Waste Storage Unit.
9. RCRA Part B Permit Application for Waste Management Activities at the Nevada National Security Site, April 2023. Mixed Waste Disposal Unit and Mixed Waste Storage Unit.