

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

Permittee Name: Hawthorne Army Depot, U.S. Dept Army
1 S Maine Ave, Bldg 1
Hawthorne, NV 89415

Permit Number: NEV2003516

Location: Hawthorne Army Depot
Plasma Ordnance Demilitarization System (PODS)
Bldg 117-2
Hawthorne, Mineral County
Latitude: 38° 35' 44" N, Longitude: 118° 39' 04" W
Township 9N, Range 30E, Section 32

Corrective Actions Sites: The PODS demilitarization facility is located on the Hawthorne Army Depot (HWAD) at Bldg 117-2 and at least one mile away from the nearest Bureau of Corrective Actions remediation site.

Wellhead Protection Area: The PODS demilitarization facility is located more than 6,000 ft away from any Drinking Water Protection Area (DWPA #4) and not within any delineated wellhead capture zones for supply wells.

General: PODS is a demilitarization facility designed to decommission obsolete (unserviceable) and outdated ordnance such as small arms munitions, detonators, fuses, primers, smoke devices and other incendiary material containing reactive (explosive) compounds. Combustible compounds are thermally incinerated in a two-stage combustion process involving a high-temperature plasma torch furnace (3,000°F) and a secondary combustion chamber (1,800°F). The metallic casings from the ordnance are reduced to a waste metallic slag in the dump crucible. There are two industrial wastewater streams from PODS consisting of treated scrubber liquor blow down (Outfall # 001) and non-contact cooling tower blow down (Outfall # 002), discharged into separate evaporation ponds, #1 and 2.

The primary wastewater stream (Outfall # 001) is generated from operation of the air and water pollution control equipment and includes scrubber blow down (liquor), filter press reject water, sand filter backwash water, and building drain sump water. Wastewater treatment operations include chemical neutralization (softening and pH adjustment), coagulation, flocculation, precipitation, clarification and filtration for the removal of metals (e.g., aluminum and trivalent chromium) and particulate matter. Waste sludge is discharged from the plant as a solid filter cake in the plate and frame filter press. The treated wastewater effluent is then discharged for evaporation at Outfall # 001 into a one-acre surface area evaporation pond #1 (10 ft depth), which has been double-lined with 60-mil HDPE. This detention pond is equipped with a leak detention sump and two monitoring wells (up and down gradient). Due to the process exposure of this effluent, reclaim of any effluent from this evaporation pond for dust control is not permitted.

The secondary wastewater stream (Outfall # 002) is non-contact cooling tower blow down. Two batteries of three-cell cooling tower units are operated for process cooling in PODS. After several cycles of passage through the towers, the cooling tower water is blow down into an evaporation pond single-lined with 60-mil HDPE. This two-compartment pond is baffled in the middle, and each storage compartment holds 220,000 gallons of water. This pond is also outfitted with a truck fill load out to supply water trucks for on-site dust control since the water is non-process contact. The truck load out outfall is designated # 003.

Flow: Flow limits for Outfalls # 001 and 002 are 15 and 30 GPM, respectively (Outfall # 003 is Monitor & Report). Since startup of the PODS in 2004, facility operation has been limited due to issues with the air pollution control equipment, which have been indicated to this bureau to include particulate clogging issues with the air handling equipment, e.g., bag house and HEPA filters. The DMR data indicated the PODS system last operated in 3rd Quarter 2007 with wastewater flows of 4.8 (daily average) / 6.2 (daily maximum) GPM (Outfall # 001) and 1.4 / 1.9 GPM (Outfall # 002), respectively. There was no reuse of pond #2 water from Outfall # 003 due to the limited quantity of water available. Thus, all pond water to date has been evaporated.

Receiving Water Characteristics: Depth to groundwater in the up and down gradient monitoring wells is 15 and 21 ft below ground surface, respectively, per the 2008 DMR. Secondary drinking water standards are met for TDS (< 1,000 mg/l), Chloride (< 100 mg/l) and Nitrate-Nitrogen (below detection limit of 0.05 mg/l) parameters. The groundwater flow gradient is northwest away from the site to Walker Lake.

DMR Analysis:

- *Flow:* 4.8 / 6.2 (Outfall # 001) & 1.4 / 1.9 (Outfall # 002) GPM, respectively.
- *pH:* 9.8 / 12.3 S.U. (Outfall # 001), basic pH levels due to softening reaction.
- *Nitrate as N:* 95.1 / 134 mg/l (Outfall # 001).
- *Nitrite as N:* 188.3 / 280 mg/l (Outfall # 001).
- *TDS:* 11,203 / 15,600 (Outfall # 001) & 232 / 250 (Outfall # 002) mg/l, respectively.
- *Chloride:* 2,352 / 3,708 mg/l (Outfall # 001).

Proposed Effluent Limitations and Special Conditions:**Table 1: Discharge Limitations**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, GPM (001, 002)	15 GPM (001)		Continuous	Flow Meter
	30 GPM (002)			
Flow, GPD (Reuse, 003)	M&R		Each Truck Load	Volumetric Determination
Leak Detection Sump, GPD (001)	≤ 50 (Submit liner repair plan if observed leakage rate is > 50 GPD)		Monthly	Volumetric Determination
Pond Freeboard, ft (001, 002)	≥ 2.0		Monthly	Staff Gage or Visual Observation
pH, SU (001, 002)	M&R		Monthly	Discrete
pH, SU (Reuse, 003)	6.0 to 9.0		Each Truck Load	Discrete
Nitrate as N, mg/L (001)	M&R		Monthly	Discrete
Nitrite as N, mg/L (001)	M&R		Monthly	Discrete
TDS, mg/L (001, 002)	M&R		Monthly	Discrete
Chloride, mg/L (001)	M&R		Monthly	Discrete
Profile 1 Analysis (001, 002)	M&R		Annually (4 th Quarter)	Discrete
Liner Inspection (001, 002)	M&R		Annually (4 th Quarter)	Visual Observation

Table 2: Groundwater Monitoring (MW-1 & MW-2)¹

PARAMETER	GROUNDWATER LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N, mg/L	10.0 ²	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation, ft	Monitor & Report	Quarterly	Field Measurement
Annual HWAD Profile ²	Monitor & Report	Annually (4 th Quarter)	Discrete

1. Groundwater samples shall be taken only after purging at least three (3) well volumes of groundwater from the monitoring well.
2. Annual HWAD Profile: 2,4-DNT; 2,6-DNT; 1,3,5-TNB; RDX; HMX; 2,4,6-TNT; Ammonium Picrate (Yellow D); TOC; Conductivity (at the well); pH (at the well); TKN; and Nitrate/Nitrite Nitrogen.

Schedule of Compliance: The Permittee shall submit the following item to the Division for review and approval (**all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control**):

- Within ninety (90) days of the permit renewal date, the Permittee shall provide an updated copy of the PODS wastewater treatment system & evaporation ponds O&M Manual including any changes made in the past five year permitting period.

Procedures for Public Comment: The Notice of the Division's intent to issue (renew) this discharge permit, subject to the conditions contained within the permit is being sent to the **Mineral County Independent News** and **Reno Gazette-Journal** newspapers for publication. The notice is also being electronically mailed to interested persons on our public notification mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **Friday, July 10, 2009, by 5:00 P.M. PST.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed permit for a period of five (5) years.

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Date: June 3, 2009