



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

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

Permittee Name: United States Air Force
99th CES/CEANQ
4349 Duffer Drive Suite 1601
Nellis AFB, NV 89191-7007

Permit Number: # NEV60030

Location: Creech Air Force Base
Indian Springs, Clark County, Nevada 89018

Wastewater Treatment Plant:
Latitude: 36° 35' 13" N, Longitude: 115° 39' 38" W
Township 16S, Range 56E, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 4

Effluent Disposal Trenches:
Latitude: 36° 35' 35" N, Longitude: 115° 39' 30" W
Township 16S, Range 56E, NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 4

General: The Division has determined to renew discharge permit # NEV60030, issued to the United States Air Force. Creech Air Force Base (Base), located in Indian Springs, operates a wastewater treatment plant to treat the wastewater generated on the Base. The treatment works include an influent lift station (pumping time meter), headworks (bar screen), aerated equalization tank, activated sludge tank, and secondary clarifier. Waste activated sludge is discharged to drying beds, air-dried and then landfilled offsite at a permitted landfill. Secondary treated effluent from the clarifier is discharged to two earthen disposal trenches for percolation. The trenches are designed to maintain minimal standing water depth, which could otherwise attract waterfowl and interfere with the flight line activity. For short-term (emergency) use, an Imhoff tank is provided for primary effluent settling. The groundwater quality at the discharge area is monitored in three sampling wells.

By summer of 2012 (estimate), the Permittee is planning to begin decommission this treatment works and connect to a nearby municipal treatment works operated by the Clark County Water Reclamation District (# NEV50040). The county's new wastewater treatment plant, which commenced operation in summer 2011, discharges tertiary treated (w/future disinfection) to the groundwater via disposal in rapid infiltration

basins. In the future, the county's effluent may be reclaimed for irrigation of public landscape area in Indian Springs. Before the Air Force Base can hook up to the county's plant, a public easement must be obtained to construct a lift station and sewage force main.

Capacity: In Dec. 2006, the Division approved a capacity increase for the Air Force Base's treatment works to 0.145 Million Gallons per Day or MGD (30-Day Average Basis) / 0.174 MGD (Daily Maximum Basis) to accommodate increased staffing on the Base. The treatment capacity was increased by installation of an aerated equalization tank and additional aeration capacity in the activated sludge treatment basin.

Bureau of Corrective Actions Sites: There is no Bureau of Corrective Action (BCA) site located within a one-mile radius of the Air Force Base's treatment works.

Wellhead Protection Area: The effluent disposal area (trenches) is located 0.5 mile north of the treatment works and further than 6,000 ft. (Drinking Water Protection Area No. 4) from all public supply wells. The nearest public supply well (Well # W01) is located 1.5 miles to the southwest and is operated by the Indian Springs Water Co (# NV0000082).

Groundwater: Depth to groundwater at the effluent disposal area averages 42 ft. below the ground surface. The groundwater gradient flows to the north and away from the flight line area. The Air Force Base's treatment works does not denitrify the effluent. With groundwater discharge, this method of effluent disposal practice has increased the groundwater nitrogen level to 6.0 mg/l (groundwater nitrogen limit of 10.0 mg/l). Nitrogen loading to the environment will decrease upon the Base's connection to the Clark County's municipal plant, which is designed to discharge denitrified effluent (≤ 10.0 mg/l of nitrogen).

Effluent: Effluent sampling indicates the attainment of secondary treatment standards following plant expansion. The Base operates a wastewater pre-treatment program including oil-water separation devices for garage floor drains. Petroleum hydrocarbon sampling indicates the discharge of treated effluent to the trenches is below the laboratory detection level for petroleum hydrocarbons.

Rational for Permit Requirements:

Flow: Treatment works capacity is per the Division's approval letter, dated Dec. 7, 2006.

BOD₅ & TSS: Limits reflect the secondary treatment standard for activated sludge treatment plants.

pH: Limit reflects groundwater discharge.

TPH & BTEX: These limits reflect the treatment of wastewater where oil and grease (O&G) contamination may have occurred from maintenance shop operation.

Profile I: The annual analysis samples inorganic contaminants including metals.

Operator Certification: Grade III requirement is in accordance with NAC 445A.289.

Table 1 - Plant Discharge Limitations

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		30 - Day Average	Daily Maximum	Frequency	Sample Type
Influent	BOD ₅ (mg/l)	Monitor & Report		Monthly	Discrete
	Total Suspended Solids (mg/l)	Monitor & Report		Monthly	Discrete
	Flow (MGD)	0.145	0.174	Continuous	Meter
Effluent	BOD ₅ (mg/l)	30	45	Monthly	Discrete
	Total Suspended Solids (mg/l)	30	45	Monthly	Discrete
	pH (Standard Units)	6.0 to 9.0		Monthly	Discrete
	Total Petroleum Hydrocarbons (mg/l) Purge & Extract (8015B)	---	1.0	Quarterly	Discrete
	Benzene (mg/l)	---	0.005	4 th Quarter	Discrete
	Ethylbenzene (mg/l)	---	0.1	4 th Quarter	Discrete
	Toluene (mg/l)	---	0.1	4 th Quarter	Discrete
	Total Xylenes (mg/l)	---	0.2	4 th Quarter	Discrete
	NDEP Profile I	---	Monitor & Report	4 th Quarter	Discrete
	Trench Staff Gauge (inches)	Monitor & Report		Monthly	Discrete

Table 2 - Groundwater Monitoring

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Quarterly Average	Daily Maximum	Measurement Frequency	Sample Type
Total Dissolved Solids (mg/l)	Monitor & Report		Quarterly	Discrete
Chlorides (mg/l)	Monitor & Report		Quarterly	Discrete
Total Nitrogen as N (mg/l)	10.0 ¹		Quarterly	Discrete
Nitrate as N (mg/l)	Monitor & Report		Quarterly	Discrete
Depth to Groundwater (feet)	Monitor & Report		Quarterly	Measurement
Groundwater Elevation (feet)	Monitor & Report		Quarterly	Measurement

Schedule of Compliance: (all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control):

- Prior to a request for the cancellation of permit # NEV60030, the Permittee shall submit documentation from a Nevada registered engineer (P.E.) that the Base's wastewater treatment works were properly abandoned (decommissioned) in accordance with the Division's Water Technical Sheet No. WTS-20.
- By **MM DD YR** (30 days following the date of permit renewal), the Permittee shall submit two (2) copies of an updated Operations & Maintenance (O&M) Manual, prepared in accordance with the Division's Water Technical Sheet no. WTS-2 documenting any equipment or operational changes to the treatment works since the last permit renewal (2006). If no plant updates or changes have occurred, the Permittee shall submit a written response by the above due date indicating that no changes have been made to the previously approved O&M Manual.

Procedures for Public Comment: The Notice of the Division's intent to renew discharge permit # NEV60030, subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** newspaper for publication. The notice is also being electronically mailed to all interested persons requesting listing on our public notification mailing list. Anyone wishing to comment on the proposed permit can do so in writing within a period of thirty (30) calendar days of the date of publication of the public notice in the newspapers. 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 **February 21, 2012 (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 renew discharge permit NEV60030 for a five-year permit term.

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 Bureau of Water Pollution Control
 Nevada Division of Environmental Protection

Date: January 13, 2012