

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T
(pursuant to NAC 445A.236)

Permittee Name: Nellis Air Force Base (AFB)
Site ST-27/SS-28 Groundwater Treatment Plant
4349 Duffer Drive, Suite 1601
Nellis AFB, Las Vegas, Nevada 89191-7007

Permit Number: NEV94006

Description of Discharge Treated groundwater

Location: The Nellis AFB Site ST-27/SS-28 Groundwater Treatment Plant is located adjacent to the southwestern portion of Nellis AFB, northwest of Las Vegas Blvd., at 4743 Range Road, Las Vegas 89115, in Clark County, Nevada.

Latitude: 36° 15' 00"N; Longitude: 114° 59' 30"W.
Sections 3 & 4, T. 20S, R. 62E. MDB&M

Characteristics: The treated groundwater produced by the groundwater treatment system is discharged via a pipeline to the Base golf course irrigation water storage pond via a distribution pipeline which has a valve and connection (with cross connection controls) installed on an existing irrigation water supply line that supplies water to the golf course pond. The distribution pipe line also continues north to supply the former nature center ponds, however this outfall is inactive at this time. The groundwater treatment system is designed to remove and treat the extracted petroleum hydrocarbon contaminated groundwater to concentrations at or below U.S. E.P.A. drinking water standards and State of Nevada discharge limitations before discharge. The contaminated water treated in the Site 27 treatment facility is extracted from numerous wells in the aquifer underlying Site 27 and Site 28 on the Nellis AFB.

Flow: The groundwater remediation system facility has a maximum daily discharge permit limitation of 150 gallons per minute/0.216 MGD per day.

Limitations:

Outfall 001 is at the discharge of the treatment plant.
Outfall 002 is at the pipeline connection with the irrigation water service line serving the golf course.
Outfall 003 is to the discharge line to the former nature center not currently in use.

FLOW: Outfall 001 150 gpm/0.216 MGD daily maximum
Outfall 002 Monitor & Report
Outfall 003 Monitor & Report

The following are daily maximum values for Outfall 001 only:

Benzene:	5 ppb
Toluene:	100 ppb
Xylenes (total isomers):	200 ppb
Ethylbenzene:	100 ppb
Total Petroleum Hydrocarbons (Jet Fuel JP-4):	1 ppm
Tetrachloroethylene: (PCE:)	5 ppb (Method 624)
1,1,2-Trichloroethane: (TCA)	5 ppb (Method 624)
Trichloroethylene: (TCE)	5 ppb (Method 624)
Trichlorofluoromethane: (Freon 11)	150 ppb (Method 624)
Bromodichloromethane:	100 ppm (Method 624)
Chlorobenzene:	100 ppb (Method 624)
Chloromethane:	Monitor and Report (Method 624)
1,3-Dichlorobenzene:	Monitor and Report (Method 624)
1,1-Dichloroethene:	7 ppb (Method 624)
Cis 1,2-Dichloroethene: (DCE)	70 ppb (Method 624)
1,1-Dichloroethane:	5 ppb (Method 624)
Chloroform:	100 ppb (Method 624)
pH:	6.0 to 9.0 Standard Units

General: The Site 27 groundwater remediation system (packed tower air-stripper) treats 150 gpm/0.216 MGD of contaminated groundwater from approximately 49 extraction wells located within and along the leading edge of the contaminant plumes at Site 27 and 28. The contaminant plume at Site #27 consists of Light Non-Aqueous Phase Liquid (LNAPL) as free product floating on the water table, including dissolved phase hydrocarbons and as dissolved product in groundwater. The plume of JP-4 jet fuel, benzene, toluene, ethylbenzene, and xylenes (BTEX) is from leaking underground storage tanks at Site 27; these tanks were removed in 1989. The plume is approximately 1300 feet long in an east-west direction with the hydraulic gradient, and 550 feet wide along a north-south axis.

The Site 28 contaminants include non aqueous phase liquid (NAPL) hydrocarbons including dissolved phase hydrocarbons in groundwater. Free product JP-4 and JP-8 (jet fuel) being extracted is the result of a leak in a fuel line tee that was since abandoned in 1994, and other ancillary and storage component leaks. The groundwater remediation at Site 28 is focused on: 1. a BTEX plume (primarily Benzene) that extends east of Site 28, eastward in the direction of the hydraulic gradient, beyond the free product plume; 2. a low concentration (near or below MCL's) TCE plume that extends eastward under the flightline; and 3. a low concentration (near or below MCL's) PCE plume that extends northwest of building 941. Some chlorinated VOC's have been detected in several perimeter monitoring wells, but these compounds are believed to stem from other source areas, rather than the fuel hydrocarbon contamination at this site.

The system of extraction wells is located within and along the leading edge of the contaminant plumes, and the on-site Site 27, five-stage groundwater treatment system is designed to 1.) pump free and dissolved-product from groundwater, 2.) collect, treat and remove JP-4, BTEX, other contaminant constituents listed above, iron, and manganese (to minimize fouling of the air-stripper); and 3.) to recycle the free product. The treatment system consists of an oil/water separator, a two-stage iron and manganese removal system, and a packed-tower air-stripper.

Receiving Water Characteristics: - the discharge via pipeline is into an irrigation water storage pond that is supplied with irrigation water from the base irrigation distribution system and several adjacent irrigation wells. This pond supplies irrigation water for the Base golf course. Depth to groundwater in the shallow aquifer underlying the area is 70 to 90 feet and is of poor quality. No adverse impacts to groundwater are expected from the treated water discharges.

Procedures for Public Comment:

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to the groundwaters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of publication of the public notice, by December 28, 2004. The comment period can be extended at the discretion of the Administrator.

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 determined 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 reissue the permit.

Proposed Effluent Limitations, Schedule of Compliance and Special Conditions

See Permit and "Limitations" above. A report evaluating remediation goals has been submitted as required, and by March 2004. There are no special conditions.

Rationale for Permit Requirements

Monitoring is required to assess the level of treatment being provided and to ensure that the groundwater is not degraded.

Prepared by: Icycl C. Mulligan
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