U.S. Army Garrison Walker Cantonment Area Lagoons
Aquifer Protection Permit No. P-100797
Place ID 408, LTF No. 84125
Significant Amendment

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

II. Permittee & Facility Location:

Permittee: U.S. Army Garrison, Yuma
Facility Location: 301 C Street, Yuma, Arizona 85365-9498.

III. Facility Description:

The Walker Cantonment Area Lagoons is a secondary wastewater treatment system that consists of five lined evaporation ponds with stabilization cells. The facility is authorized to treat an annual average of 0.110 million gallons per day (mgd) of combined domestic sewage, cooling tower blow down and vehicle wash racks wastewater. The facility receives water from vehicle wash racks after passing thru oil/water separators. Each wash rack has its own oil/water separator. The facility has discontinued the use of treating photo processing wastewater in 2012 through the lagoon system. The wastewater shall be disposed by evaporation in the five lined evaporation ponds. Sludge shall be removed from the ponds and disposed at a state approved landfill in accordance with state and federal waste disposal rules and regulations.

The depth to groundwater is approximately 165 feet below the ground surface. The groundwater flow direction is west-southwest based on ADWR maps. The nearby surface water features are the Colorado River, located approximately 5.25 miles west of the facility and the Gila River, located approximately five miles south of the facility.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

IV. Amendment Description:

The purpose of this amendment is to:

1. Update the facility name from Material Test Area (MTA) Lagoons to Walker Cantonment Area Lagoons.
2. Change Total Coliform to E.coli in the Groundwater Monitoring Table 8.
3. Reduce groundwater sampling frequency from monthly to quarterly in the Groundwater Monitoring Table 8 due to no history of exceedances for groundwater constituents for the past 7 years of monitoring.
4. In Table 7: Routine Discharge Monitoring, update the reporting frequency for Total Flow: Daily, Total Flow: Monthly Average, and Total Nitrogen: Five-sample rolling geometric mean from Semi-Annual to Quarterly. Additionally, update the sampling frequency of Total Nitrogen: Five-sample rolling geometric mean from semi-annual to monthly.

The reduction in monitoring frequency makes this a significant amendment as per A.A.C. R18-9-A211(B)(4), which states "The permittee requests and the Department agrees to less stringent monitoring or reporting or reduces the number of pollutants monitored, and the permittee demonstrates that the changes will not affect the permittee's ability to remain in compliance with Articles 1 and 2 of this Chapter."

V. Regulatory Status

The facility was last inspected on 1/31/2019 and was found to be in compliance.

VI. Best Available Demonstrated Control Technology (BADCT):

The Walker Cantonment Area Lagoons consists of five lined evaporation ponds with stabilization cells. A freeboard of a minimum three (3) feet must be maintained as required in Table 9: Facility Inspection and Operational Monitoring.

The treatment facility shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

VII. Compliance with Aquifer Water Quality Standards (AWQS):

To ensure that site operations do not result in violation of Aquifer Water Quality Standards at the point of compliance, representative samples of the effluent shall be collected from the inlet diversion box. The permittee shall monitor the effluent daily for flow, monthly for total nitrogen, and semi-annually for metals and VOCs (See Section 4.2, Table 7 in the permit).

To ensure that AWQS will be met at the POC in the aquifer, representative samples of the groundwater will be collected from POC Well, and will be sampled quarterly for E.coli, total nitrogen, nitrate-nitrite as N, and total Kjeldahl nitrogen (TKN), annually for metals, volatile and semi-volatile organic compounds. (See Section 4.2, Table 8 in the permit).

Facility inspection and operational monitoring shall be performed on a routine basis (See Section 4.2, Table 9 in the permit).