

**Ruth Fisher School Wastewater Reclamation Facility**

Aquifer Protection Permit No. P#102439

Place ID 3453, LTF No. 79910

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:**

The facility is located 38201 W. Indian School Road, Tonopah, Arizona 85354, in Maricopa County, Arizona.

**III. Facility Description:**

The Saddle Mountain Unified School District #90 is authorized to operate the Ruth Fisher School Wastewater Reclamation Facility (WRF), a 0.042 million-gallon-per-day (mgd) multi-stage nutrient removal facility which includes an influent lift station, bar screen, flow equalization basin, anoxic/aerobic basins, secondary clarifier, filtration, chlorination, an effluent pump station, and an aerobic digester and sludge thickener. Effluent is disposed by sub-surface infiltration chambers. The infiltration chambers include 33 units located beneath the ball field west of the WRF. The eight seepage pits previously permitted for the existing WWTP under a General APP have been retained for emergency disposal purposes only. De-chlorination shall be provided for the effluent delivered to the infiltration chambers. Sludge shall be vaulted and hauled off-site to an approved disposal facility in accordance with state and federal waste disposal rules and regulations.

In addition, the permittee is authorized to discharge up to 0.0215 mgd of brine (reject water) from the on-site electro dialysis reversal water treatment facility (EDR WTF) into an above-ground wastewater storage tank where it may be blended with up to 0.042 mgd of effluent from the WRF. The effluent and brine blend (herein referred to as "blended wastewater") is delivered to the infiltration chambers, which can also accommodate a monthly average of 0.0635 mgd as a monthly average.

#### **IV. Amendment Description:**

ADEQ reviewed and approved the following changes to the permit:

- Set Alert Levels and Aquifer Quality Limits for Total Nitrogen, Metals and Volatile Organic Carbon (VOCs) parameters at POC well #1. The limits were 'Reserved' before for these parameters.
- Changed the monitoring frequency for VOCs from semi-annual to annual in Table IA for Routine Discharge Monitoring and Table IC for Blended Wastewater Monitoring
- Changed the monitoring frequency for Metals from quarterly to semi-annually in Table IB for Routine Discharge Monitoring and Table ID for Blended Wastewater Monitoring
- Removed monitoring requirements for Indicator Parameters except for Total Dissolved Solids from Table IC of Reject Water Monitoring, Table ID of Blended Wastewater Monitoring, and Table IIA for Groundwater Monitoring at POC well.
- Removed monitoring requirements for fecal coliform from Table IC for Blended Wastewater Monitoring.
- Added the monitoring requirements for nitrates and fluoride for Reject Water Monitoring to determine the concentration in the reject stream as drinking water source is high in nitrates and fluoride
- Removed the groundwater monitoring requirements for Drinking Water Supply Well #1. The memo from hydrologist provides more information and rationale for removing the monitoring requirements.
- Removed the reuse option for disposal of effluent as the facility no longer reuse the effluent and not anticipating to renew the Industrial Reclaimed Water Permit
- Changed the alert level (AL) and discharge limit (DL) for fluoride from 3.2 mg/l and 4.0 mg/l to 'monitor' (monitor only – no limits set) in Table IA for Routine Discharge Monitoring and Table IC for Blended Wastewater Monitoring

The reduction in monitoring frequency makes this a significant amendment as per A.A.C. R18-9-A211(B)(4).

#### **V. Regulatory Status**

- Ruth Fisher School received a Notice of Violation (NOV), Case #174037 dated February 20, 2018, for failure to submit an amendment to set the AL and AQL for POC well as required by the Compliance Schedule, to perform monitoring as specified in Section 2.5 of the permit and exceeding the discharge limits for Total Nitrogen and Fluoride.
- This amendment is in response to the NOV which was closed on January 14, 2020.

#### **VI. Best Available Demonstrated Control Technology (BADCT):**

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). The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

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

To ensure that site operations do not violate Aquifer Water Quality Standards at the point of compliance, representative samples of the effluent shall be collected from the point of discharge from at the effluent pump station per Table IA. The permittee shall monitor the effluent daily for fecal coliform, monthly for total nitrogen, semi-annually for metals, and annually for volatile and semi-volatile organic compounds (VOCs and SVOCs). The EDR WTF Reject water is monitored per Table IB and Blended Wastewater is monitored per Table IC. The permittee shall monitor the effluent daily for fecal coliform, monthly for total nitrogen, semi-annually for metals, and annually for volatile and semi-volatile organic compounds (VOCs and SVOCs) (see Section 4.2, Table IA in the permit).

To ensure that discharge of effluent from the recharge basins does not violate Aquifer Water Quality Standards at the applicable point(s) of compliance, the groundwater shall be monitored at Point of Compliance Wells POC Monitoring Well #1 quarterly for total nitrogen, *E.coli*, semi-annually for metals, and annually for VOCs and SVOCs.

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