Clear Springs WWTP
Aquifer Protection Permit No. P-100824
Place ID 9698, LTF No. 87662
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: Hope Water Arizona South, Inc.
The facility is located at Allen Street west of US Highway 191, Sunsites in Cochise County, Arizona.

III. Facility Description:

The permittee is authorized to operate the Clear Springs Wastewater Treatment Plant (WWTP) with a maximum average monthly flow of 69,000 gallons per day (gpd). ADEQ has graded this facility as a Grade 1 wastewater treatment plant. The facility shall have an operator in direct responsible charge who is certified for the class and grade of the facility and is available to the onsite representative and ensures an onsite operator visits the facility monthly.

Wastewater from the Sunsites retirement community and some local businesses is collected and treated in the evaporation ponds. The WWTP consists of a lift station, four clay/bentonite lined evaporative ponds and one overflow pond, having a total surface area of 6.4 acres and an average depth of 10 feet. Pond 3 was separated by a small intermediate berm to have two ponds, Pond 3N and Pond 3S. No industrial wastewater is received in the WWTP.

Wastewater is first pumped into Pond 1 from the lift station while all valves controlling direct flow to the other ponds are closed. As Pond 1 fills and gets close to full, wastewater from Pond 1 flows into overflow pipes to allow wastewater to flow either to Pond 2 or to Pond 3. Flows to ponds are managed by controlling valves during normal or emergency operations or during isolation of ponds for maintenance. All wastewater disposal is by evaporation and percolation. The sludge is disposed of to the Elfrida Regional Landfill in accordance with State and Federal regulations.

IV. Amendment Description:

The purpose of this amendment is to:

- Propose a new POC well MW-3 for groundwater monitoring as required by the Consent Order Docket No. APP-07-23 dated August 14, 2023,
- Add the ambient groundwater monitoring and routine groundwater monitoring requirement for POC well MW-3,
- Update the closure cost estimates and the financial assurance mechanism.

The permit category for this amendment was determined to be a "Significant Amendment" as per A.A.C. R18-9-A211(B)(5) because of the change in the designation of the point of compliance well.

V. Regulatory Status

- Hope Water Arizona South, Inc., received a Consent Order, Docket No. APP-07-23 dated August 14, 2023, for violating numeric aquifer water quality standards (AWQS) for an inorganic chemical in Point of Compliance well and failure to make a complete monitoring record for each measurement made as required by an individual Aquifer Protection Permit (APP) P-100824.
- This amendment is in response to a Consent Order, Docket No. APP-07-23 dated August 14, 2023. This amendment was received on August 8, 2024.

VI. Best Available Demonstrated Control Technology (BADCT):

The treatment facility is designed, constructed, operated, and maintained to meet the treatment performance criteria for existing facilities as specified in A.A.C. R18-9-B205. The evaporative ponds are lined with clay/bentonite.

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

The Points of Compliance (POCs) have been established at the following locations:

POINT OF COMPLIANCE					
POC #	**POC Location**	**ADWR #**	**Latitude (North)**	**Longitude (West)**	**Screen Interval (ft)**
MW-2	Northwest boundary of the property	55-570890	31° 57' 14.0"	109° 50' 30.0"	130-150
MW-3 (Proposed)	Near the MW-2 on the northeastern edge of the property	TBD[1]	31° 57' 19.8"	109° 50' 27.8"	TBD[1]

The depth to groundwater is approximately 326 ft below ground surface (bgs) and the groundwater flow direction is to the north northeast.

[1]TBD-To be provided upon installation of the well.

Groundwater monitoring is required at the MW-2 and MW-3 POC wells. MW-2 is the existing POC well which will be monitored until a new proposed POC well - MW-3 is installed and commence routine groundwater monitoring under **Error! Reference source not found.**.

Table 8 in the permit requires flow monitoring daily and average flow monthly. To ensure that Aquifer Water Quality Standards will be met at the POC in the aquifer, representative samples of the groundwater shall be collected from MW-2, and is sampled quarterly for *E. coli*, total nitrogen, nitrate-nitrite as N, total Kjeldahl nitrogen (TKN), and water level, annually for metals, volatile and semi-volatile organic compounds and pesticides.

Table 10 in the permit requires ambient monitoring of groundwater from a new proposed POC well MW-3 for eight quarterly samples. Upon completion of the ambient groundwater monitoring for a new proposed POC well MW-3, Table 11 in the permit shall be monitored quarterly for *E. coli*, total nitrogen, nitrate-nitrite as N, nitrate as N, nitrite as N, total Kjeldahl nitrogen (TKN), and water level, annually for metals, volatile and semi-volatile organic compounds and pesticides.