

**Mark Anthony Brewing Plant
Aquifer Protection Permit No. P-513319
Place ID 198939, LTF No. 91861
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 at 9601 N. Reems Road in Glendale, in Maricopa County, Arizona.

Permittee:	Mark Anthony Brewing, Inc.
Permittee Address:	145 South Wells Street Chicago, IL 60606

III. Facility Description:

Mark Anthony Brewing Inc. is authorized to discharge treated water (effluent) from an industrial Wastewater Treatment System (WWTS) for Mark Anthony Brewing (MAB) Plant with a maximum monthly average flow of 1.24 million gallons per day (mgd). MAB Plant is a beverage manufacturing plant located in Glendale, Arizona.

The water used for production of beverage products will be pumped from an on-site production well at a maximum rate of 1440 gallons per minutes (gpm). The water will be treated through a Reverse Osmosis (RO) system with a granular activated carbon designed by Suez Water Technologies & Solutions. Then the treated water will be used in the production of beverages. The RO reject water will be discharged to an onsite industrial WWTS.

The facility will consist of a WWTS to treat the wastewater generated at the site. The WWTS will receive wastewater generated by brewing operations including cleaning tanks, cleaning equipment, any product spillage, cooling tower blowdown water, boiler blowdown water and RO reject water. The WWTS consists of a wastewater wet well with pumps, wastewater storage tank, pH polishing tank, AquaTex Bioreactors #1, #2 and #3, Dissolve Air Flotation (DAF) unit, tertiary disk filter, sludge storage tank and sludge press. The surge tanks will be used to store any out-of-compliance

effluent during a potential process upset conditions. The sludge from the sludge press will be hauled offsite for management or disposal to landfill.

The treated process water will be discharged to three on-site recharge wells (RW-1, RW-2, RW-3) for the purpose of replenishing the aquifer beneath the MAB manufacturing plant. The treated process water generated at the MAB will be routinely monitored per the requirements in Table 6 to ensure that all constituents meet the Aquifer Water Quality Standard (AWQS) prior to discharge into the proposed wells.

The WWTS effluent may also be reused for a beneficial purpose other than the production or processing of a crop or substance that could be used as human or animal food, per A.A.C. R18-9-C701(A)(2). The facility will be providing the effluent for irrigation of the rose farms. The facility shall monitor the effluent per Table 6 when effluent is discharged for irrigation of the rose farms.

IV. Amendment Description:

This application for a significant amendment was received on June 30, 2022. The purpose of this amendment is:

- The general purpose of the application is to obtain authorization to discharge up to 1.24 mgd of WWTS treated water to aquifer-storage and recovery wells and local farm fields for irrigation.
- Address the change in disposal method and subsequent permit conditions to comply with R18-9-A211(B)(9).
- Update the Cost Estimate/Financial Demonstration per the proposed change in treated process water disposal.
- Remove the Dysart Drain AZPDES outfall and replace with the proposed discharge to the three recharge wells and irrigation fields.
- Remove the compliance schedule to utilize concrete lined ditch and Dysert Drain for effluent discharge to the AZPDES Outfall.
- Remove the compliance schedule item for notifying the department prior to discharging to the AZPDES Outfall.
- Remove the compliance schedule item for submittal of the Total Nitrogen Summary Report.
- Remove the compliance schedule item regarding the reduced routine discharge monitoring.
- Add compliance schedule items for the submittal of well installation reports for recharge wells RW-1, RW-2, and RW-3.
- Add compliance schedule item for the installation of POC Well No.1 and submittal of final completion report.
- Add compliance schedule item for the submittal of Ambient Groundwater Monitoring and establishment of Aquifer Quality Limits and Alert Levels at POC Well No.1.

The permit category for this amendment was determined to be an “Significant Amendment” as per A.A.C. R18-9-A211(B)(9) as it is a change in disposal method and subsequent permit conditions during the routine operation of the WWTS.

V. Regulatory Status

The Compliance Status Report dated February 9, 2023, shows that the facility is compliant with the APP and Arizona rules and statutes. The latest inspection report (No. # 394359) dated March 22, 2022, also demonstrated operational compliance with the APP and Arizona rules and statutes.

VI. Best Available Demonstrated Control Technology (BADCT):

BADCT was achieved with engineering designs that assure the treated wastewater meets all applicable Aquifer Water Quality Standards (AWQS). In addition, the plant is designed to achieve Surface Water Standards for Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) before being discharged to the Outfall.

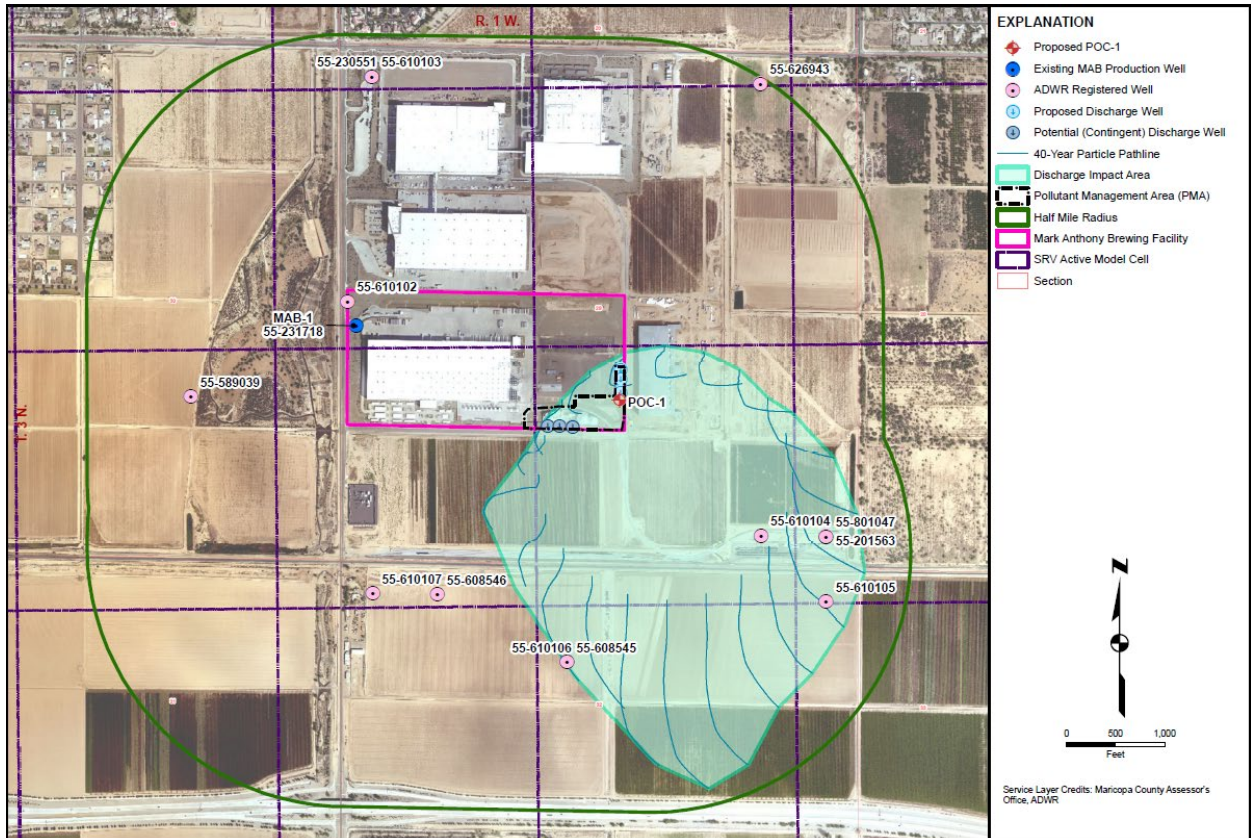
The BADCT for effluent discharge to the Outfall is the WWTS. The WWTS shall be maintained as described in this permit. Any modifications to the approved BADCT shall be submitted to ADEQ in the form of an amendment prior to construction or upgrade of a new or existing feature.

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

To ensure that site operations do not violate Aquifer Water Quality Standards (AWQS) at the point of compliance (POC), representative samples of the effluent shall be collected from the point of discharge located downstream of the tertiary filters. The facility shall monitor effluent quarterly for total nitrogen, nitrate as N, nitrite as N, nitrate-nitrite as N, Total Kjeldahl Nitrogen (TKN), BOD, TSS, pH, and metals per Table 6 during discharge to local farm fields and recharge wells. In addition, total flow at the discharge will be monitored daily and reported quarterly.

To ensure that AWQS will be met at the POC in the aquifer, representative samples of the groundwater will be collected from POC Well No.1, and will be sampled quarterly for depth to water, temperature, pH, specific conductance, total dissolved solids, total coliform, total nitrogen, nitrate as N, nitrite as N, nitrate-nitrite as N, TKN, pH, and metals, and semi-annually for volatile and semi-volatile organic compounds per the monitoring requirements in Table 8.

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



Pollutant Management Area and Discharge Impact Area.