

Morton Salt-Glendale Facility  
Aquifer Protection Permit No. P-100176  
Place ID 717, LTF No. 66885  
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:**

13000 West Glendale Avenue  
Glendale, Arizona 85307-2408

**III. Facility Description:**

Morton Salt, Inc is authorized to operate the Morton Salt-Glendale Facility, with a maximum daily average flow of 424,000 gallons per day (gpd). The facility produces various crystallized salt products. The facility consists of three injection wells, co-regulated under separate EPA UIC permits, a cavern at the base of each well, and 15 impoundments for solar evaporation, milling facilities, and an office/warehouse. The injection/recovery wells are used to extract brine from the Luke Salt Body. The depth to the salt body is approximately 1000 feet below ground. The extracted saturated brine is delivered to the impoundments for the settling of clays and silts and then for solar evaporation. Salt crystallizes as the brine evaporates. The salt is harvested for processing into salt products.

The United States Environmental Protection Agency (EPA) issued the facility three Underground Injection Control (UIC) Class III permits (EPA-UIC permits AZS000000004, AZS000000005 and R9UIC-AZ3-FY08-1) for the monitoring and reporting of the integrity of the three brine injection/recovery wells and associated salt caverns, Roach Baker #3 (RB#3), Roach Baker #4 (RB#4) and Roach Baker #5 (RB#5), respectively.

**IV. Amendment Description:**

ADEQ reviewed and approved this permit amendment as follows:

1. Enlarge and re-line Pond 1SB.
2. Revise permit Section 2.1 descriptions for several discharging facilities (recommendation is to use revisions to update BADCT descriptions).
3. Revise the closure/post-closure cost estimate and financial assurance mechanism.

4. Revise the permit to allow for a determination of current groundwater flow direction and set a compliance schedule for replacing the two current POC monitoring wells.
5. Revise permit Section 2.5.1.3 to eliminate soil moisture monitoring, as presented in the post application response.
6. Revise Permit Section 2.5.2.4 description of fissure monitoring
7. Revise Permit Section 2.5.2.6 injection/recovery well monitoring.
8. Add Compliance Schedule Items.
9. Clarify the permit language and correct typos for POC wells, in Section 4.2, Tables IIA, IIC, and IID.
10. Change the alerts levels (ALs) and aquifer quality limits (AQLs) for the Amerigas # 2 well. (Subsequently Morton Salt agreed to remove the Amerigas #2 well from the permit, and conduct groundwater level monitoring to determine new POC locations(s)).
11. Revise Table IIIC inspection frequency for Brine Ponds and flow control.

The permit category for this amendment was determined to be an “Significant Amendment” as per A.A.C. R18-9-A211(B)(4)(5).

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

The latest inspection dated February 26, 2019 indicates that the facility was found to be in compliance with the APP and Arizona rules and statutes.

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

Facilities regulated by this permit shall be designed, constructed, operated, and maintained to meet requirements specified by A.R.S. §49-243(B) and A.A.C. R18-9-A202(A)(5).

#### **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, groundwater monitoring is required under this permit per Section 4.2, Table IIB, IIC, IID and IIE for major cations, major ions, metals and radiochemicals.

Facility inspections and operational monitoring will be performed on a routine basis (see Section 4.2, Tables IIIA, IIIB and IIIC, in the permit).