STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P- 105868
PLACE ID 19859, LTF 63371
SIGNIFICANT AMENDMENT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3 and Chapter 4 Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A. A. C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the City of Phoenix is hereby authorized to land apply industrial wastewater for dust suppression at the City of Phoenix State Route 85 (SR 85) Landfill located in the Town of Buckeye, Maricopa County, Arizona, over groundwater of the Gila Bend Basin in portions of Sections 8, 9, 10, 15, 16, 17, 21, 22, and 27 of Township 3 South, Range 4 West of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods), unless suspended or revoked pursuant to A.A.C. R18-9-A213. The Permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below, or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant, and as determined at the applicable POC, occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name:	City of Phoenix State Route 85 Landfill
Facility Address:	28361 West Patterson Road Buckeye, Arizona 85326 Maricopa County
Permittee:	City of Phoenix Public Works Department Solid Waste Disposal Management Division
Permittee Address:	3060 S. 27th Avenue Phoenix, Arizona 85009
Permitted Flow Rate:	4,286 gallons per day (gpd)
Facility Contact:	Jean M. (Marty) Arambel, P.E. SR 85 Landfill Project Manager
Emergency Phone No.:	(602) 534-1157
Latitude/Longitude:	33° 11' 24" North / 112° 40' 31" West
Legal Description:	Portions of Sections 8, 9, 10, 15, 16, 17, 21, 22, and 27 of Township 3 South, Range 4 West of the Gila and Salt River base Line and Meridian

1.2 Authorizing Signature

_____

Trevor Baggiore, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this _____day of _____, 2016

THIS AMENDED PERMIT SUPERCEDES ALL PREVIOUS PERMITS

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

The State Route 85 (SR 85) Landfill is operated by the City of Phoenix (COP) and is being permitted to reuse the reject water from the on-site reverse osmosis (RO) water treatment system. The Landfill is located in southwestern Maricopa County approximately 17 miles south of Interstate 10 (I10), approximately one mile west of SR 85 and immediately south of Patterson Road. The Landfill site covers approximately 2,652 acres of agricultural land. 640 acres of the site are permitted for waste disposal. Daily operations at the Landfill include disposal of municipal solid waste (MSW) by tipping waste containers at the active landfill area, which is limited to several acres and is covered daily.

The RO System generates approximately 30,000 gallons per week or 4,286 gallons per day of RO reject water, which is stored in aboveground storage tanks located near the Administration Building and the Patterson Building. The RO reject water shall be used to supplement the groundwater currently used at the facility for dust suppression on the soil stockpiles that are greater than five feet above the ground surface and within the approximately 400 acres designated as the pollution management area (PMA).

The RO reject water shall be applied by utilizing a water truck and/or water pull with a spray bar. The soil stockpile sprayed with the RO reject water shall be consumed in the landfill operations within 15 days of starting dust control spray. No overspray that can cause ponding or surface flow is allowed in the sprayed area.

The purpose of this amendment is to increase the volume of reverse osmosis (RO) reject water from 5,000 gallons per week (gpw) to 30,000 gpw for dust suppression at the landfill site.

The depth to groundwater is approximately 250 to 325 feet below ground surface (bgs) at the facility and the direction of groundwater flow is south.

The site includes the following permitted discharging facilities:

Facility Name	Latitude (North)	Longitude (West)
Administration Building RO Reject Tank	33° 10’ 60"	112° 40’ 09"
Patterson Building RO Reject Tank	33° 11’ 21"	112° 40’ 32"

Annual Registration Fee [A.R.S. § 49-242]
The Annual Registration Fee for this permit is established by A.R.S. § 49-242 and is payable to ADEQ each year. The permitted flow for fee calculation is 4,286 gallons per day. If the facility is not yet constructed or is incapable of discharge at this time, the permittee may be eligible for reduced fees under the rule. Send all correspondence requesting reduced fees to the Water Quality Division of ADEQ. Please reference the permit number, LTF number and why reduced fees are requested under the rule.

Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]
The Permittee shall be required to demonstrate financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The Permittee shall be required to maintain financial capability throughout the life of the facility. The closure and post-closure costs have been estimated at $72,024.00. The financial assurance mechanism shall be demonstrated through A.A.C. R18-9-A203(B)(1) and (2).

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

COP shall use RO reject water from their on-site reverse osmosis water treatment system to conduct dust suppression on soil stockpiles that are greater than five feet above ground surface and within the approximately 400 acres designated as the PMA. The dust suppression activity at the facility shall include the use of approximately 30,000 gallons per week of RO reject water to supplement the groundwater currently used at the facility on the soil stockpile. The soil stockpile sprayed by the RO reject water shall be

consumed in the landfill operations within 15 days of starting dust control spray. No overspray that can cause ponding or surface flow is allowed in the sprayed area.

The subsurface characteristics of the project site consist of relatively low permeability soils (clayey sand) that typically minimize discharge into the underlying water bearing formations. Based on geotechnical data obtained from the site, the permeability of soils in the upper 10 feet of the site had a value of 3.6x10-4 centimeters per second (cm/sec). A Hydrologic Evaluation of Landfill Performance Version 3.0 (HELP-3) Model was used to evaluate the amount of percolation through the ground surface. The modeling results indicate that the dust suppressant activities will result in a low percolation rate through the modeled 12-inch soil layer immediately below the surface, assuming the worst case ponding scenario, and the discharge is not likely to percolate beyond 4 feet of the upper most vadose zone.

Surface water shall be diverted away from the landfill through topographic measures and drainage channels. The dust suppression activity shall not result in excessive ponding or runoff to adjacent drainage channels located on the site. The stormwater control system shall be designed to convey the 100-year, 24-hour on-site and off-site flows around the landfill and ensure the adjacent floodplains are not adversely impacted.

Per A.R.S. 49-243.B.1, "…the opportunity for water conservation…" may be used in determining best available demonstrated control technology. Use of the RO reject water for a portion of the dust control water contributes to the BADCT demonstration.

2.2.1 Engineering design for BADCT

The COP Landfill has a Master Facility Plan Approval (MFPA) No. 50541300.08 signed on October 7, 2013, by the director of ADEQ Waste Programs Division. Material and data for this amendment was signed and sealed by Syed S. Amanatullah, P.E. on January 9, 2014. The report reviewed and approved by ADEQ to increase the RO reject water is prepared, signed and sealed by Syed S. Amanatullah, P.E., dated December 4, 2015.

2.2.2 Site-specific Characteristics

Site specific characteristics are included as part of the BADCT demonstration for the site as described in Section 2.2. The subsurface characteristics of the project site consist of relatively low permeability soils (clayey sand) that typically minimize discharge into the underlying water bearing formations. The depth to groundwater ranged from 250 to 325 feet (bgs).

2.2.3 Pre-operational Requirements

Not required under the terms of this permit

2.2.4 Operational Requirements

Application of RO reject water for dust suppression shall be performed in accordance with the plan(s) submitted in the application and according to the following requirements:

1. Runoff of RO reject water from the application area to any surface water body or wash is prohibited. Application of RO reject water for dust suppression is limited to the specific area as indicated in the permit application and supporting documentation and as listed in Section 2.0 of this permit.
2. Use application methods that reasonably preclude human contact with RO reject water.
3. Use application methods that minimize ponding and runoff.
4. Use application methods that prevent overspray.
5. Inform employees and others involved as to the source of the dust suppression water and any constraints on its use.

The following activities **are prohibited**:

1. Application of RO reject water for soil stockpile dust suppression shall not occur within 10 feet of on-site drainage channels, landfill cells and permitted boundary.
2. RO reject water shall not be applied when ground is saturated or during rain events.

3. Application of RO reject water that causes runoff in to a surface water body or wash.
4. Misapplying RO reject water for any of the following reasons:

a. Application of RO reject water to any area other than the soil stockpile dust suppression area; and or

b. Allowing runoff of RO reject water or RO reject water mixed with stormwater from the soil stockpile dust suppression area.

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to use up to a maximum of 30,000 gallons per week of RO reject water for soil stockpile dust suppression at the COP SR 85 Landfill as stated in Section 2.0
2. In the event that the permittee is not able to use the RO reject water for soil stockpile dust suppression, the RO reject water shall be disposed of off-site in accordance with all local, state and federal regulations
3. Specific discharge limitations are listed in Section 2.5.2 and Section 4.2, Table IA.

2.4 Point(s) of Compliance [A.R.S. § 49-244]

The Point of Compliance (POC) is designated at the following location:

Well Number	POC Locations	Latitude (North)	Longitude (West)	ADWR Number
POC #1 (conceptual)	Southwest corner of the PMA	33° 08' 57"	112° 40' 04" "	TBD

Groundwater monitoring is not required at POC No. 1 at the time of permit issuance. The Director may amend this permit to require installation of the well and initiation of groundwater monitoring at the POC or to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

Unless otherwise specified in this permit, all monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. Monitoring shall commence the first full monitoring period following permit issuance. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

The permittee shall monitor the RO reject water annually according to Section 4.2, Table IA. A representative sample of the RO reject water shall be collected from the RO reject water storage tank according to Section 4.2, Table1A.

2.5.2 Facility / Operational Monitoring

The permittee shall perform weekly inspections of the RO Reject water/Brine Tank, water truck and spray system in accordance with Section 4.2, Table III. If damage is identified during an inspection that could cause or contribute to an unauthorized discharge, proper repairs shall be promptly performed. The permittee shall maintain an application logbook tracking the discharge activities including the volume and location of RO reject water discharge within the PMA. The record of all inspections and information required to be recorded in the facility logbook shall be included in the Annual Report as required in Section 2.7.4.

2.5.3 Groundwater Monitoring and Sampling Protocols

Routine groundwater monitoring is not required under the terms of this permit.

2.5.4 Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required at time of permit issuance.

2.5.5 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the Permittee shall follow the contingency requirements of Section 2.6 and may propose "other actions" including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. § 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, AZ 85007
Phone: (602) 364-0720

2.5.6 Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the Water Permits Section for approval prior to installation and the permit shall be amended to include any new points.

2.6 Contingency Plan Requirements
[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Requirements

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and knowledgeable of the contingency and emergency plans.

Any AL that is exceeded or any violation of an AQL, discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of a groundwater AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

2.6.2 Exceeding of Alert Levels and Performance Levels

2.6.2.1 Exceeding of Alert Levels Set for Operational Conditions

1. If the operational monitoring set in Section 4.2, Table III has been exceeded the permittee shall conduct an investigation that includes: inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the AL being exceeded.
2. The facility is no longer on alert status once the operational monitoring no longer indicates an AL exceedance. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring

1. If an AL set in Section 4.2, Table IA has been exceeded, the permittee shall immediately investigate to determine the cause of the AL being exceeded. The investigation shall include the following:
   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the AL being exceeded.
   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences.
2. The permittee shall discontinue use of the RO reject water for soil stockpile dust control and use an alternative means of disposal of the RO reject water that meets all local, state and federal regulations.
3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
4. Within 30 days of an AL being exceeded, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
6. The permittee may resume use of the RO reject water after corrective actions have been implemented and the RO reject water no longer exceeds the Discharge Monitoring AL.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

Routine groundwater monitoring is not required at time of permit issuance.

2.6.2.4 Exceeding Alert Levels Set for Soil Monitoring

Soil monitoring is not required under the terms of this permit.

2.6.3 Discharge Limitations Violations

1. If a DL set in Section 4.2, Table IA has been violated, the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:
   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;

b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
c. Sampling of individual waste streams composing the wastewater for the parameters in violation.

2. The permittee shall discontinue use of the RO reject water for dust control and use an alternative means of disposal of the RO Reject water that meets all local, state, and federal regulations.

3. The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.

2.6.4 Aquifer Quality Limit Violation

Not required under the terms of this permit.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241 That Are Not Addressed Elsewhere in Section 2.6

2.6.5.1 Duty to Respond

The Permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Water Quality Compliance Section within 24 hours upon discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL to be exceeded at a POC, or (b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Water Quality Compliance Section and the Southern Regional Office within 24 hours upon discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The Permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Water Quality Compliance Section within 30 days of the discharge or as required by subsequent ADEQ action. The report shall

summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3(2). If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 and actions identified in the approved contingency plan already approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the Permittee shall obtain written approval from the Water Permits Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the Permittee shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements
[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the ADEQ WQCS, Data Unit.

2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.

3. In addition to the SMRF, the information contained in Section 2.7.3 shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.
   - Table 1A- Routine Discharge Monitoring

   The parameters listed in the above-identified table from Section 4.2 are the only parameters for which SMRF reporting is required.

4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.
   - Table III, Facility Inspection (Operational Monitoring) – Log Book (only)

2.7.2 Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;

2. Date and time inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book, and
7. Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The Permittee shall notify the Water Quality Compliance Section Unit in writing within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition or discharge limitation or Alert Level exceedance.
2. The Permittee shall submit a written report to the Water Quality Compliance Section within 30 days of becoming aware of the violation of any permit condition, discharge limitation, or AL exceedance. The report shall document all of the following:
   a. Identification and description of the permit condition for which there has been a violation and a description of its cause.
   b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
   c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation.
   d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard or an AQL at a POC.
   e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
   f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

2.7.4.1 Annual Report

The permittee shall submit an annual report in narrative and/or tabular form to the Water Quality Compliance Section, Enforcement Unit that briefly summarizes the status of compliance under this permit. The report shall identify any contingency actions taken, violations of this permit, any Alert Levels or Discharge Limitations that have been exceeded; shall summarize the findings of the monitoring required by Section 2.5, Section 2.6, and Section 4.2; and shall include any information specifically required by permit condition to be submitted in the annual report. The annual report is to be submitted by March 30 of each year to cover activities from January 1 through December 31st of the previous year, consistent with Section 2.7.6.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Data and Enforcement Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to:

Arizona Department of Environmental Quality
Water Quality Inspections and Compliance Unit
Mail Code: 5415B-1

1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4497

All documents required by this permit to be submitted to the Water Permits Section shall be directed to:

Arizona Department of Environmental Quality
Water Permits Section
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the report due dates:

Monitoring conducted:	Report due by:
Annual: January-December	March 30

2.7.7 Changes to Facility Information in Section 1.0

The Water Permits Section and Water Quality Compliance Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The Permittee shall give written notice to the Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater.

At the time of notification the Permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ's approval, the Permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the Permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three years. If the Permittee intends to permanently cease operation of any facility, the Permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K) (6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the Permittee shall give written notice of closure to the Water Quality Compliance Section of the Permittee's intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, the Permittee shall submit for approval to the Water Permits Section, a Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean closure immediately, ADEQ shall issue a letter of approval to the Permittee. If the closure plan contains a schedule for bringing the facility to a clean closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2 Closure Completion

Upon completion of closure activities, the Permittee shall give written notice to the Water Permits Section indicating that the approved Closure Plan has been implemented fully and providing supporting documentation to demonstrate that clean closure has been achieved (soil sample

results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, ADEQ shall issue a letter of approval to the Permittee at that time and shall terminate the permit. If any of the following conditions apply, the Permittee shall follow the terms of post-closure stated in this permit:

1. Clean closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with aquifer water quality standards at the applicable point of compliance;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;
5. Further action is necessary to meet property use restrictions.

2.10 Post-closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Water Permits Section.

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the Permittee shall submit for approval to the Water Permits Section a Post-closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-closure Plan shall meet all requirements of A.R.S. §§ 49-201(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the Post-closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-closure Plan.

2.10.1 Post-closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2 Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]
For each compliance schedule item listed below, the Permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Water Permits Section. A copy of the cover letter must also be submitted to the Water Quality Compliance Section.

No.	Description	Due by:	Permit Amendment
3.1	The permittee shall submit an annual report as required in Section 2.7.4.	March 30 of each year to cover activities from January 1 through December 31 of the previous year.	No
3.2	The permittee shall submit an RO reject water characterization report every five years starting in 2017. The report shall include all of the pollutants listed in A.A.C. R18-11-406; or the City can propose to exclude some pollutants from the characterization if a reasonable explanation is submitted and approved by ADEQ. The permittee shall provide the report in tabular format that includes the results of the characterization.	Due to ADEQ on January 30th of the year following the monitoring year. The first report is due January 30, 2017.	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (or CONSTRUCTION REQUIREMENTS)

Not Required

4.2 COMPLIANCE AND OPERATIONAL MONITORING

Table IA Discharge Monitoring
Table III Facility Inspection Monitoring (Log Book)

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING

Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
RO Reject/Brine Tank	South of the Administration Building			33° 10' 60" N	112° 40' 09" W
Patterson Building	Patterson Building RO Tanks			33° 11' 21" N	112° 40' 32" W
Parameter	**AL**[1]	**DL**[2]	**Units**	**Sampling Frequency**	**Reporting Frequency**
Discharge Volume	Monitor	30,000	gpw[3]	Weekly	Annually
pH	Monitor[4]	Monitor	SU[5]	Annually	Annually
Total Dissolved Solids TDS	Monitor	Monitor	mg/l[6]	Annually	Annually
Alkalinity	Monitor	Monitor	mg/l	Annually	Annually
Total Nitrogen[7]	Monitor	Monitor	mg/l	Annually	Annually

[1]AL = Alert Level
[2]DL = Discharge Limit
[3] gpw = Gallons per week
[4]Monitoring required, but no limits established
[5]SU = Standard Unit
[6]mg/l = milligrams per liter
[7] Total Nitrogen = nitrate as N plus nitrite as N plus Total Kjeldahl Nitrogen

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING

Parameter	AL[8]	DL[9]	Units	Monitoring Frequency	Reporting Frequency
Metals (total):					
Calcium	Monitor[10]	Monitor	mg/l	Annually	Annually
Chloride	Monitor	Monitor	mg/l	Annually	Annually
Fluoride	Monitor	Monitor	mg/l	Annually	Annually
Potassium	Monitor	Monitor	mg/l	Annually	Annually
Sulfate	Monitor	Monitor	mg/l	Annually	Annually
Antimony	Monitor	Monitor	mg/l	Annually	Annually
Arsenic	Monitor	Monitor	mg/l	Annually	Annually
Barium	Monitor	Monitor	mg/l	Annually	Annually
Beryllium	Monitor	Monitor	mg/l	Annually	Annually
Cadmium	Monitor	Monitor	mg/l	Annually	Annually
Chromium	Monitor	Monitor	mg/l	Annually	Annually
Lead	Monitor	Monitor	mg/l	Annually	Annually
Mercury	Monitor	Monitor	mg/l	Annually	Annually
Nickel	Monitor	Monitor	mg/l	Annually	Annually
Selenium	Monitor	Monitor	mg/l	Annually	Annually
Thallium	Monitor	Monitor	mg/l	Annually	Annually
Zinc	Monitor	Monitor	mg/l	Annually	Annually
Manganese	Monitor	Monitor	mg/l	Annually	Annually
Copper	Monitor	Monitor	mg/l	Annually	Annually
Silver	Monitor	Monitor	mg/l	Annually	Annually

Parameter	AL	DL	Monitoring Frequency	Reporting Frequency
Gross Alpha[11]:	Monitor	Monitor	Annually	Annually
Radium-226 and Radium-228	Monitor	Monitor	Annually	Annually

[8] AL = Alert Level
[9] DL = Discharge Limit
[10] Monitoring required, but no limits established.
[11] If the Gross Alpha Particle is greater than fifteen (15) pCi/L, then test for adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha activity, including radium 226, minus radon and total uranium (the sum of uranium 238, uranium 235, and uranium 234 isotopes).

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE III
FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK[12]

Parameter	Performance Standard	Monitoring Frequency	Reporting Frequency
Storage Tank	Good working condition	Weekly	Annually
Water Trucks	Good working condition	Weekly	Annually
Spray System	Good working condition	Weekly	Annually

[12] The permittee shall record the inspection performance levels in a log book as per Section 2.7.2. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1.	APP Other Amendment Application, dated:	December 10, 2015
2.	Final Hydrologist memo, dated:	NA
3.	Final Engineering memo, dated:	January 21, 2016
4.	Public Notice, dated:	NA
5.	Responsive Summary, dated:	NA

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

The Permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 49-263]

The Permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The Permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The Permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the Permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The Permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The Permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the Permittee.
2. The entry of any order or judgment not issued by the Director against the Permittee for the enforcement of any environmental protection statute or rule.

6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The Permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 Inspection and Entry [A.R.S. §§ 41-1009, 49-203(B) and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The Permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices specified by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension & Revocation
[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, renewed, or revoked for cause, under the rules of the Department.

The Permittee shall notify the Water Permits Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit the correct facts or information.

7.2 Severability
[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the Permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).