

**STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-105443
PLACE ID 21018, LTF 64460
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, 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 Arizona Department of Environmental Quality (ADEQ) hereby authorizes the City of Mesa to operate the Greenfield Water Reclamation Plant, located at 4400 South Greenfield Road, Gilbert, Arizona, in Maricopa County, over groundwater of the Phoenix Active Management Area, in Township 2 S, Range 6 E, Section 9, N¼, SE¼ of the Gila and Salt River Baseline 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: Greenfield Water Reclamation Plant
Facility Address: 4400 South Greenfield Road
Gilbert, Arizona 85296
County: Maricopa

Permittee: City of Mesa
Permittee Address: P.O. Box 1466, Mail Stop 5010
Mesa, Arizona 85211-1466

Permitted Flow Rate: 30,000,000 gallons per day (gpd)

Facility Contact: Water Reclamation Supervisor
Emergency Phone No.: (480) 644-6012

Latitude/Longitude: 33° 16' 12" N/ 111° 44' 34" W
Legal Description: Township 2S, Range 6E, Section 9, N¼, SE¼ of the Gila and Salt River
Baseline and Meridian

1.2 AUTHORIZING SIGNATURE

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

Signed this _____ day of _____, 2019

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 City of Mesa is authorized to operate the Greenfield Water Reclamation Plant (WRP) Expansion, with a total capacity to collect and treat an average annual daily flow of 30.0 million gallons per day (mgd), and a maximum average monthly wastewater flow of 33.0 mgd under this permit amendment. Currently the existing facility has a total capacity to collect and treat an average annual daily flow of 16.0 million gallons per day (mgd), and a maximum average monthly wastewater flow of 24.0 mgd. The WRP consists of two (2) main processes (liquids and solids) and ancillary facilities.

The Existing Facility

The main liquids processes include headworks with bar screens and grit removal, an influent pump station, primary sedimentation basins, aeration basins for biological nutrient removal (BNR), secondary clarifiers, tertiary filters, disinfection by ultraviolet (UV) light or chlorination (hypochlorite), stand-by chemical coagulation facilities, and an effluent pump station. The main solids treatment processes include thickening centrifuges, anaerobic digesters, and dewatering centrifuges. The facility also receives sludge from the City of Mesa – Southeast WRP, Inventory (APP No. P-100254), for further treatment at this site. Ancillary facilities include chemical storage and feed systems, odor control systems, sludge pumps, and digester waste gas burners.

Expansion

The main liquids processes include two (2) existing and two (2) new bar screens, four (4) existing and two (2) new influent pumps, two (2) existing vortex grit removal systems, two (2) existing and one (1) new primary sedimentation basins, two (2) existing and two (2) new aeration basins for BNR, four (4) existing and three (3) new secondary clarifiers, six (6) existing (back-up/emergency use) tertiary cloth disk media filters, eight (8) new AquaDisk cloth filters, two (2) new chlorine contact basins, a new dechlorination system, and an effluent pump station. The main solids treatment processes include two (2) new primary sludge screens, three (3) existing thickening centrifuges, two (2) existing and two (2) new anaerobic digesters, and two (2) existing and one (1) new dewatering centrifuges. The ancillary facility also receives sludge from City of Mesa – Southeast WRP, Inventory (APP No. P-100254), for further treatment at this site. Ancillary facilities include chemical storage and feed systems, odor control systems, sludge pumps, and digester waste gas burners.

Effluent may be disposed by recharge at the Town of Gilbert South Recharge Site (APP No. P-105302), reused under a valid Town of Gilbert reclaimed water permit (R105757), reused under a valid Town of Queen Creek reclaimed water permit (R511918), or discharged to the surface, either to the Gila River Indian Community (GRIC) canal via pipeline, or to the East Maricopa Floodway (EMF) under a valid Arizona Pollutant Discharge Elimination System (AZPDES) permit (No. AZ0025241). Discharge to the EMF shall only occur when the effluent cannot be disposed by the other disposal options listed above.

Amendment Description

ADEQ reviewed and approved the:

- Addition of new bar screens
- Addition of new influent pumps
- Addition of a new primary sedimentation basin and primary sludge pump station
- Addition of new and modification to the existing aeration basins operation from the Modified Ludzak-Ettinger (MLE) process to a 4-stage Bardenpho™ process for better process stability. Other modifications to the aeration basins configuration include a change in technology from coarse bubble diffusers to fine bubble diffusers.
- Addition of new secondary clarifiers and RAS/scum pump station
- Change in tertiary filtration system, from an inside-out partially submerged cloth media filter to an outside-in fully submerged cloth media filter.
- Use of chlorine disinfection (with bulk sodium hypochlorite) in lieu of the existing UV disinfection technology.

- Addition of a new sodium bisulfite facility for dechlorination, as needed. The plant currently does not have a dechlorination facility.
- Addition of new sludge screens
- Addition of new anaerobic digesters
- Addition of a new dewatering centrifuge

The depth to groundwater is approximately 100 to 150 feet below the land surface and the direction of groundwater flow is toward the east-southeast. The WRP is designed and constructed according to plans approved by the ADEQ.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

The WRP includes the following permitted discharging facilities:

Facility	Latitude	Longitude
Center of WRP	33° 16' 12" N	111° 44' 34" W
Discharge to EMF	33° 15' 45" N	111° 43' 32.16" W
Discharge to Gila River Indian Community Canal	33° 12' 15.48" N	111° 45' 10.08" W

Annual Registration Fee [A.R.S. § 49-242 and A.A.C. R18-14-104]

The annual registration fee for this permit is payable to ADEQ each year. The permitted flow for fee calculation with an annual average daily flow of 30.0 million gallons per day (mgd), a maximum monthly average daily flow of 33.0 mgd. 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 has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is \$1,890,000.00. The financial capability was demonstrated through A.A.C. R18-9-A203(B)(1) and (2).

2.2 Best Available Demonstrated Control Technology (BADCT)

[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The treatment facility has been 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 meets 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.

2.2.1 Engineering Design

The Design Report for the expansion and upgrades to the WRP was prepared and sealed by Chad D. Meyer, an Arizona registered Professional Engineer, of Carollo Engineers, dated December 2017.

The existing WRP was designed as per the design report prepared by Carollo Engineers, dated October 17, 2003.

2.2.2 Site-specific Characteristics

Not applicable.

2.2.3 Pre-operational Requirements

The permittee shall submit a signed, dated and sealed Engineer’s Certificate of Completion (ECOC) for the facilities constructed for the Expansion within 90 days of completion of construction per Section 3.0, Compliance Schedule Items, # 3.1, of the permit.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the treatment facility site at all times; the manual shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table III - Facility Inspection (Operational Monitoring).
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in the event of a violation or exceedance as per Section 2.7.3.

2.2.5 Reclaimed Water Classification

[A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class A, B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.6 Certified Area-wide Water Quality Management Plan Conformance

[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Area-wide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

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 operate the WRP:
 - Existing facility with an annual average daily flow of 16.0 million gallons per day (mgd), maximum monthly average daily flow of 24.0 mgd.
 - The expanded WRP shall operate with an annual average daily flow of 30.0 million gallons per day (mgd), a maximum monthly average daily flow of 33.0 mgd.
 - AZPDES discharge to the East Maricopa Floodway (EMF) shall not exceed a total of 60 calendar days per year, per Sections 2.6.2.2.2 and shall be reported per Sections 2.7.4.1 and 3.0, Compliance Schedule Item # 3.2. Discharge to the EMF shall only occur when the effluent cannot be disposed to the Town of Gilbert South Recharge Site, Town of Gilbert reuse, Town of Queen Creek reuse, or the Gila River Indian Community (GRIC) canal.
2. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BADCT.
3. Specific discharge limitations are listed in Section 4.2, Tables I, IA and IB.

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

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

POC #	POC Location	Latitude	Longitude
1	Within 750 feet east of the Greenfield WRP	33° 16' 14" N	111° 44' 21" W
2	Within 750 feet southeast of the AZPDES discharge point into the East Maricopa Floodway (EMF) Wagner Wash	33° 15' 46" N	111° 43' 26" W

Groundwater monitoring is not required at the point of compliance wells, except as a contingency action per Sections 3.2 Compliance Schedule Items and 2.6.2.2.2 at POC #2.

The Director may 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. Unless otherwise provided, 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 Pre-Operational Monitoring

Not required under the terms of this permit.

2.5.2 Routine Discharge Monitoring

The permittee shall monitor the effluent for the parameters listed under Section 4.2, Tables I or IA. Flows will be measured at the flowmeter at the reuse discharge point and following dechlorination at the AZPDES discharge flowmeter. A representative sample of the wastewater shall be collected following dechlorination on the AZPDES discharge line.

2.5.3 Reclaimed Water Monitoring

The permittee shall monitor the reclaimed water parameters listed under Section 4.2, Table 1B in addition to the routine discharge monitoring parameters listed in Section 4.2, Tables I or IA. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent pump station.

2.5.4 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table III.

If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in case of a violation or exceedance as per Section 2.7.3.

2.5.5 Groundwater Monitoring and Sampling Protocols

Not required under the terms of this permit.

2.5.6 Surface Water Monitoring and Sampling Protocols

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

2.5.7 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. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

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

2.5.8 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 Groundwater Protection Value Stream for approval prior to installation and the permit shall be amended to include any new monitoring 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 this permit and the approved contingency and emergency response plan 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 follow the contingency and emergency plans.

Any AL exceedance, or violation of an AQL, 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 an 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 or DL. 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 had 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 Performance Levels Set for Operational Conditions

1. If an operational performance level set in Section 4.2, Table III has been exceeded the permittee shall:
 - a. Notify the Groundwater Protection Value Stream (see Section 2.7.5) within five (5) days of becoming aware of the exceedance.
 - b. Submit a written report to the Groundwater Protection Value Stream within 30 days after becoming aware of the exceedance. The report shall document all of the following:
 - (1) A description of the exceedance and the cause of the exceedance;
 - (2) The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;
 - (3) Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;
 - (4) Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
 - (5) Any malfunction or failure of pollution control devices or other equipment or process.

2. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level is being exceeded. 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 (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Tables I and IA has been exceeded, the permittee shall immediately investigate to determine the cause of the AL exceedance. 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 exceedance;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
 - c. If necessary to identify the cause of the AL exceedance, sampling of individual waste streams composing the wastewater for the parameters being exceeded.
2. 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 exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
3. Within 30 days of an AL exceedance, the permittee shall submit the laboratory results to the ADEQ Groundwater Protection Value Stream, along with a summary of the findings of the investigation, the cause of the AL exceedance, and actions taken to resolve the problem.
4. 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.

2.6.2.2.1 Exceeding Permit Flow Limit

1. If the Alert Level (AL) for monthly average flow in Section 4.2, Tables I or IA has been exceeded, the permittee shall submit an application for an APP amendment to expand the WRP or submit a report detailing the reasons that expansion is not necessary.
2. Acceptance of the report instead of an application for expansion requires ADEQ, Groundwater Protection Value Stream approval.

2.6.2.2.2 Exceeding of Alert Limit for flow to East Maricopa Floodway

AZPDES discharges to the East Maricopa Floodway shall only occur when the effluent cannot be disposed to the Town of Gilbert South Recharge Site, Town of Gilbert reuse, Town of Queen Creek reuse, or the Gila River Indian Community (GRIC) canal. Discharges to the EMF shall not exceed a total of 60 calendar days per year. Currently no groundwater monitoring is required downgradient of the discharge to the EMF. However, if the facility becomes aware that the total flow in a calendar year will exceed a total of 60-days of discharges per calendar year, the facility shall notify the Groundwater Protection Value Stream, within five (5) days. The facility will submit a report with an explanation of the 60-calendar day anticipated exceedance per Section 2.7.4.1 and Compliance Schedule Item 3.2.

If the facility exceeds the total of 60-days of discharges in a calendar year, the facility shall notify the Groundwater Protection Value Stream, within 30 days. The facility will submit a report with an explanation of the 60-calendar day yearly exceedance per Section 2.7.4.1 and Compliance Schedule Item 3.2. Until the permit is amended to include groundwater monitoring, all discharges to the EMF will be monitored monthly

for Nitrate-Nitrite as N, Nitrate as N and Nitrite as N as per Section 4.2, Table IC, Contingency Monitoring.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

Not applicable - Groundwater monitoring is not required under this permit.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

Not applicable - Groundwater monitoring is not required under this permit.

2.6.2.3.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards

Not applicable - Groundwater monitoring is not required under this permit.

2.6.3 Discharge Limit Violation

1. If a DL set in Section 4.2, Tables I, IA or IB has been violated, the permittee shall immediately investigate to determine the cause. 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;
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Protection Value Stream 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, notification of downstream or downgradient users who may be directly affected by the discharge, 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.

2. 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.

2.6.4 Aquifer Quality Limit Violation

Not applicable - Groundwater monitoring is not required under 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

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 Groundwater Protection Value Stream within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL exceedance, 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 Groundwater Protection Value Stream within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AQL exceedance, or 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 Groundwater Protection Value Stream 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. 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 the 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 have already been 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 Groundwater Protection Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of 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 operator shall submit to the Groundwater Protection Value Stream, 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]

2.7.1 Self-Monitoring Report Form

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) through the myDEQ online reporting system.
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 reporting period, the permittee shall enter “not required” on the form, include an explanation.

3. The tables contained in Section 4.2 list the monitoring parameters and the frequencies for reporting results on the SMRF:
 - Table I, Discharge Monitoring
 - Table IA, Discharge Monitoring
 - Table IB, Reclaimed Monitoring

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

4. Within the eSMRF comments fields, or 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.

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; and
6. Any other information required by this permit to be entered in the log book.
7. Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection Value Stream in writing within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation, or of an AL exceedance.
2. The permittee shall submit a written report to the Groundwater Protection Value Stream within 30 days of becoming aware of the violation of any permit condition, AQL, or DL. 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 the 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 AWQS;
 - e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
 - f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2, Table III in the facility log book as per Section 2.7.2, and report to the Groundwater Protection Value Stream any violations or exceedances as per Section 2.7.3.

2.7.4.1 Alert Limit for flows to the East Maricopa Floodway Report

The permittee shall submit an alert level report for flows to the East Maricopa Floodway to the Groundwater Protection Value Stream within five (5) days of becoming aware that the total flow in a calendar year will exceed a total of 60-days per calendar year of discharges per Sections 2.6.2.2.2 and 3.0, Compliance Schedule Item, 3.2 or has exceeded the total of 60-days per calendar year of discharges per Section 3.0 Item Compliance Schedule Item, 3.5.

The report shall include an explanation for anticipated exceedance or reason for exceedance of the 60-day discharge limitation, quality of the effluent discharged, and a proposed design for the monitor well at POC #2 per Section 2.4. The proposed well shall be designed to monitor groundwater quality within the uppermost portion of the uppermost aquifer at the well site. Upon approval of the of POC well #2 by the Groundwater Protection Value Stream, the permittee shall initiate the well installation, ambient sampling, submit a permit amendment per Section 3.0, Compliance Schedule Items, 3.3, 3.4, or 3.5.

2.7.4.2 Well Installation Report

A well installation report shall be submitted to the Groundwater Protection Value Stream within sixty (60) days after the completion a point of compliance well, Section 3.0,(Compliance Schedule) Item, 3.4. The well installation report shall be completed in accordance with A.A.C. R12-15-801 et seq. and consist of the following:

- Copies of Arizona Dept. of Water Resources (ADWR) Notice of Intent and all related submittals to ADWR;
- Boring log and well as-built diagram;
- Total depth of well measured after installation;
- Top of well casing or sounding tube (whichever is used as the fixed reference measuring point) and ground surface elevation;
- Depth to groundwater;
- Geophysical logging reports and subsurface sampling results, if any;
- Description of well drilling method;
- Description of well development method;
- If dedicated sampling equipment installed, details on the equipment and at what depth the equipment was installed;
- Summary of analytical results for initial groundwater sample collected after installation;
- Corresponding analytical data sheets; and
- GPS coordinates for each new well.

2.7.5 Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: <http://www.azdeq.gov/welcome-mydeq>

All other documents required by this permit to be submitted to the Groundwater Protection Value Stream shall be directed to:

Arizona Department of Environmental Quality
Groundwater Protection Value Stream
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007

Phone (602) 771-4999

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Protection Value Stream shall be notified within ten 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 Groundwater Protection Value Stream before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report “temporary cessation” in the comment section.

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 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 Groundwater Protection Value Stream 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 Groundwater Protection Value Stream of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report “closure in process” in the comment section.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Protection Value Stream, 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 Groundwater Protection Value Stream 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. 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 the AWQS at the applicable POC;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remediation or mitigation measures are necessary to achieve compliance with Title 49, Ch. 2; and
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 Groundwater Protection Value Stream.

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Protection Value Stream 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 Groundwater Protection Value Stream.

No.	Description	Due by:	Permit Amendment Required?
3.1	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion (ECOC) facilities constructed for the Expansion in a format approved by the Department.	within 90 days of completion of construction	No
3.2	The permittee shall submit an Alert Level for Flows to East Maricopa Floodway (EMF) Report, per Section 2.6.2.2.2 and Section 2.7.4.1.	Within five (5) days of becoming aware that AZPDES discharges to the EMF will exceed 60 total calendar days during the current year	No
3.3	Upon approval by the Groundwater Protection Value Stream Approval of the EMF Report, the permit shall install the POC Well #2 and initiate groundwater monitor.	within sixty days (60) after the Approval	No
3.4	Upon completing the ambient groundwater monitoring the permittee shall submit an APP amendment application which includes the well installation report per Section 2.7.4.2.	Within 30 calendar days after completing the ambient groundwater monitoring	Yes
3.5	If permittee exceeds the total of 60 days of discharges to the EMF in a calendar year, contingency monitoring will begin as per Section 4.2, Table IC, Contingency Monitoring until the permit has been amended as per Section 2.3.2.2.2 and Section 2.7.4.1.	Within five (5) day of exceeding the 60 total calendar days of flow	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable at permit issuance

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE 1:
ROUTINE DISCHARGE MONITORING (Existing Facility)**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1 Reuse -TGSRS Flows	Flow meter located on the Town of Gilbert Reclaimed Water Reservoir influent line			33° 16' 17" N	111° 44' 21" W
2 Reuse - GRICC Flows	Flow meter located on the pipeline leading to the Gila River Indian Community Canal			33° 15' 49" N	111° 44' 24" W
3 Reuse - TQC Flows	Flow meter located on the pipeline leading to the Roosevelt Water Conservation District Canal for delivery of Town of Queen Creek reuse			33° 15' 46.32" N	111° 43' 36.38" W
Parameter	AL ²	DL ³	Units	Sampling Frequency	Reporting Frequency
Total Flow ⁴ : Daily	Not Established	Not Established	mgd ⁶	Daily	Quarterly
Total Flow: Average Monthly ⁷	22.8	24.0	mgd	Monthly Calculation	Quarterly
Total Flow: Annual Averages	15.2	16.0	mgd	Annually ⁹ Calculation	Annually
Reuse Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Average Monthly	22.8	24.0	mgd	Monthly Calculation	Quarterly
Sampling Point Number	Sampling Point Identification			Latitude	Longitude
4 AZPDES Flow ¹⁰ to the EMF	Flow meter located on the line for the AZPDES flow			33° 15' 49" N	111° 44' 23" W
Parameter	Alert Level	Limit	Units	Sampling Frequency	Reporting Frequency
Maximum No. of days discharge shall flow to the EMF	Not established	≤60 ¹¹	Days	Annually	Annually

1 Cease monitoring under this Table upon ADEQ’s approval of the ECOC.
2 AL = Alert Level
3 DL = Discharge Limit
4 Flow shall be measured using a continuous recording flow meter which totals flow for all methods of disposal (reuse and AZPDES).
5 Not Established = Monitoring required but no limits have been specified at time of permit issuance.
6 mgd = million gallons per day
7 Monthly = Calculated value = Average of daily flows in a month.
8 Average annual daily flow of 16.0 million gallons per day (mgd), maximum average monthly flow of 24.0 mgd.
9 Annually = Calculated value = Average of daily flows in a year.
10 Effluent discharge to the EMF shall only occur when the effluent cannot be disposed to the Town of Gilbert South Recharge Site, Town of Gilbert reuse, Town of Queen Creek reuse, or the Gila River Indian Community (GRIC) canal. Effluent may not be discharge to the EMF for more than 60 days in a calendar year.
11 If the total flow in a calendar year exceeded 60 days of flows, the facility shall notify the Groundwater Protection Value Stream per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.2, 3.3, and 3.4. Per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.5 for the contingency action concerning exceeding flow limit, until the permit is amended to include groundwater monitoring at POC #2, all discharges to the EMF will be monitored daily per Section 4.2, Table 1C.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE I
ROUTINE DISCHARGE MONITORING (Existing Facility - continued)

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
5	Effluent Pump Station Effluent is sampled prior to the effluent wet well			33° 16' 18" N	111° 44' 25" W
Parameter	AL ¹²	DL ¹³	Units	Sampling Frequency	Reporting Frequency
<i>E. coli</i> : Single sample maximum	Not established	15.0	MPN ¹⁴	Monthly	Quarterly
<i>E. coli</i> : Seven-sample median	Not established	Non-detect	MPN	Monthly	Quarterly
Total Nitrogen ¹⁵ : Five-sample rolling geometric mean ¹⁶	8.0	10.0	mg/l ¹⁷	Monthly	Quarterly
Metals (total):					
Antimony	0.0048	0.006	mg/l	Semi-Annual	Semi-Annual
Arsenic	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Barium	1.60	2.00	mg/l	Semi-Annual	Semi-Annual
Beryllium	0.0032	0.004	mg/l	Semi-Annual	Semi-Annual
Cadmium	0.004	0.005	mg/l	Semi-Annual	Semi-Annual
Chromium	0.08	0.1	mg/l	Semi-Annual	Semi-Annual
Cyanide (as free cyanide)	0.16	0.2	mg/l	Semi-Annual	Semi-Annual
Fluoride	3.2	4.0	mg/l	Semi-Annual	Semi-Annual
Lead	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Mercury	0.0016	0.002	mg/l	Semi-Annual	Semi-Annual
Nickel	0.08	0.1	mg/l	Semi-Annual	Semi-Annual
Selenium	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Thallium	0.0016	0.002	mg/l	Semi-Annual	Semi-Annual

¹²AL = Alert Level

¹³DL = Discharge Limit

¹⁴MPN = Most Probable Number / 100 ml sample. A value of <2.2 shall be considered to be non-detect.

¹⁵Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

¹⁶The five-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together, then take the fifth root of the product. *Example: $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$*

¹⁷mg/l = milligrams per liter

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE I
ROUTINE DISCHARGE MONITORING (Existing Facility - continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
Benzene	0.004	0.005	mg/l	Annual	Annual
Carbon tetrachloride	0.004	0.005	mg/l	Annual	Annual
o-Dichlorobenzene	0.48	0.6	mg/l	Annual	Annual
para-Dichlorobenzene	0.06	0.075	mg/l	Annual	Annual
1,2-Dichloroethane	0.004	0.005	mg/l	Annual	Annual
1,1-Dichloroethylene	0.0056	0.007	mg/l	Annual	Annual
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Annual	Annual
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Annual	Annual
Dichloromethane	0.004	0.005	mg/l	Annual	Annual
1,2-Dichloropropane	0.004	0.005	mg/l	Annual	Annual
Ethylbenzene	0.56	0.7	mg/l	Annual	Annual
Monochlorobenzene	0.08	0.1	mg/l	Annual	Annual
Styrene	0.08	0.1	mg/l	Annual	Annual
Tetrachloroethylene	0.004	0.005	mg/l	Annual	Annual
Toluene	0.8	1.0	mg/l	Annual	Annual
Trihalomethanes (total) ¹⁸	0.08	0.1	mg/l	Annual	Annual
1,1,1-Trichloroethane	0.16	0.2	mg/l	Annual	Annual
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Annual	Annual
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Annual	Annual
Trichloroethylene	0.004	0.005	mg/l	Annual	Annual
Vinyl Chloride	0.0016	0.002	mg/l	Annual	Annual
Xylenes (Total)	8.0	10.0	mg/l	Annual	Annual

¹⁸Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING¹⁹ (Expansion Facility)

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1 Reuse - TGSRS Flows	Flow meter located on the Town of Gilbert Reclaimed Water Reservoir influent line			33° 16' 17" N	111° 44' 21" W
2 Reuse - GRICC Flows	Flow meter located on the pipeline leading to the Gila River Indian Community Canal			33° 15' 49" N	111° 44' 24" W
3 Reuse - TQC Flows	Flow meter located on the pipeline leading to the Roosevelt Water Conservation District Canal for delivery of Town of Queen Creek reuse			33° 15' 46.32" N	111° 43' 36.38" W
Parameter	AL ²⁰	DL ²¹	Units	Sampling Frequency	Reporting Frequency
Total Flow: Daily ²²	Not Established ²³	Not Established	mgd ²⁴	Daily	Quarterly
Total Flow: Average Monthly ²⁵	31.35	33.0	mgd	Monthly Calculation	Quarterly
Total Flow: Annual Average ²⁶	28.5	30.0	mgd	Annual ²⁷ Calculation	Annually
Reuse Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Average Monthly	31.35	33.0	mgd	Monthly Calculation	Quarterly
Sampling Point Number	Sampling Point Identification			Latitude	Longitude
4 AZPDES Flow ²⁸ to the EMF	Flow meter located on the line for the AZPDES flow			33° 15' 49" N	111° 44' 23" W
Parameter	Alert Level	Limit	Units	Sampling Frequency	Reporting Frequency
Maximum No. of days discharge shall flow to the EMF	Not established	≤60 ²⁹	Days	Annually	Annually

¹⁹ Begin monitoring under this Table upon ADEQ's approval of the ECOC.

²⁰ AL = Alert Level

²¹ DL = Discharge Limit

²² Flow shall be measured using a continuous recording flow meter which totals flow for all methods of disposal (reuse and AZPDES).

²³ Not Established = Monitoring required but no limits have been specified at time of permit issuance.

²⁴ mgd = million gallons per day

²⁵ Monthly = Calculated value = Average of daily flows in a month.

²⁶ Average annual daily flow of 30.0 mgd, maximum average monthly flow of 33.0 mgd.

²⁷ Annually = Calculated value = Average of daily flows in a year.

²⁸ Effluent discharge to the EMF shall only occur when the effluent cannot be disposed to the Town of Gilbert South Recharge Site, Town of Gilbert reuse, Town of Queen Creek reuse, or the Gila River Indian Community (GRIC) canal. Effluent may not be discharge to the EMF for more than 60 days in a calendar year.

²⁹ If the total flow in a calendar year exceeded 60 days of flows, the facility shall notify the Groundwater Protection Value Stream per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.2, 3.3, and 3.4. Per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.5 for the contingency action concerning exceeding flow limit, until the permit is amended to include groundwater monitoring, all discharges to the EMF will be monitored daily per Section 4.2, Table 1C.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING (Expansion Facility - continued)

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
5	Effluent Pump Station Effluent is sampled prior to the effluent wet well			33° 16' 18" N	111° 44' 25" W
Parameter	AL ³⁰	DL ³¹	Units	Sampling Frequency	Reporting Frequency
<i>E. coli</i> : Single sample maximum	Not established	15.0	MPN ³²	Monthly	Quarterly
<i>E. coli</i> : Seven-sample median	Not established	Non-detect	MPN	Monthly	Quarterly
Total Nitrogen ³³ : Five-sample rolling geometric mean ³⁴	8.0	10.0	mg/l ³⁵	Monthly	Quarterly
Metals (total):					
Antimony	0.0048	0.006	mg/l	Semi-Annual	Semi-Annual
Arsenic	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Barium	1.60	2.00	mg/l	Semi-Annual	Semi-Annual
Beryllium	0.0032	0.004	mg/l	Semi-Annual	Semi-Annual
Cadmium	0.004	0.005	mg/l	Semi-Annual	Semi-Annual
Chromium	0.08	0.1	mg/l	Semi-Annual	Semi-Annual
Cyanide (as free cyanide)	0.16	0.2	mg/l	Semi-Annual	Semi-Annual
Fluoride	3.2	4.0	mg/l	Semi-Annual	Semi-Annual
Lead	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Mercury	0.0016	0.002	mg/l	Semi-Annual	Semi-Annual
Nickel	0.08	0.1	mg/l	Semi-Annual	Semi-Annual
Selenium	0.04	0.05	mg/l	Semi-Annual	Semi-Annual
Thallium	0.0016	0.002	mg/l	Semi-Annual	Semi-Annual

³⁰AL = Alert Level

³¹DL = Discharge Limit

³²MPN = Most Probable Number / 100 ml sample. A value of <2.2 shall be considered to be non-detect.

³³Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

³⁴The five-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together, then take the fifth root of the product. Example: $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

³⁵mg/l = milligrams per liter

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING (Expansion Facility - continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
Benzene	0.004	0.005	mg/l	Annual	Annual
Carbon tetrachloride	0.004	0.005	mg/l	Annual	Annual
o-Dichlorobenzene	0.48	0.6	mg/l	Annual	Annual
para-Dichlorobenzene	0.06	0.075	mg/l	Annual	Annual
1,2-Dichloroethane	0.004	0.005	mg/l	Annual	Annual
1,1-Dichloroethylene	0.0056	0.007	mg/l	Annual	Annual
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Annual	Annual
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Annual	Annual
Dichloromethane	0.004	0.005	mg/l	Annual	Annual
1,2-Dichloropropane	0.004	0.005	mg/l	Annual	Annual
Ethylbenzene	0.56	0.7	mg/l	Annual	Annual
Monochlorobenzene	0.08	0.1	mg/l	Annual	Annual
Styrene	0.08	0.1	mg/l	Annual	Annual
Tetrachloroethylene	0.004	0.005	mg/l	Annual	Annual
Toluene	0.8	1.0	mg/l	Annual	Annual
Trihalomethanes (total) ³⁶	0.08	0.1	mg/l	Annual	Annual
1,1,1-Trichloroethane	0.16	0.2	mg/l	Annual	Annual
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Annual	Annual
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Annual	Annual
Trichloroethylene	0.004	0.005	mg/l	Annual	Annual
Vinyl Chloride	0.0016	0.002	mg/l	Annual	Annual
Xylenes (Total)	8.0	10.0	mg/l	Annual	Annual

³⁶Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING
Not require under the permit

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS A⁺³⁷

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
5	Effluent Pump Station Effluent is sampled prior to the effluent wet well		33° 16' 18" N	111° 44' 25" W
Parameter	DL	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ³⁸ : Five-sample rolling geometric mean	10.0	mg/l	Monthly Calculation	Quarterly
<i>E. coli</i> ³⁹ : Single-sample maximum	15	MPN ⁴⁰	Daily ⁴¹	Quarterly
<i>E. coli</i> : Four of last seven samples	Non-detect	MPN	Daily Evaluation	Quarterly
Turbidity ⁴² : Single reading	5.0	NTU ⁴³	Daily ⁴⁴	Quarterly
Turbidity: 24-hour average	2.0	NTU	Daily Calculation	Quarterly

³⁷Reclaimed water monitoring under Table 1B shall be performed in addition to routine discharge monitoring required under Section 4.2, Tables I and IA.

³⁸Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)

³⁹*E. coli* monitoring results that meet the specified discharge limits are considered to demonstrate compliance with A.A.C. R18-11-303.

⁴⁰ MPN = Most Probable Number per 100 ml. A value of <2.2 shall be considered to be non-detect.

⁴¹For MPN **only**, “daily” sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each seven-day period are obtained and analyzed.

⁴²Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. Occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.

⁴³Nephelometric Turbidity Units

⁴⁴For the single turbidity reading, “daily” means the maximum reading during the 24-hour period.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IC
CONTINGENCY MONITORING - AZPDES⁴⁵

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
4	Flow meter located on the line for the AZPDES flow			33° 15' 49" N	111° 44' 23" W
Parameter	AL⁴⁶	DL⁴⁷	Units	Sampling Frequency	Reporting Frequency
Nitrate-Nitrite as N	8.0	10.0	mg/l	Monthly	Quarterly
Nitrate as N	8.0	10.0	mg/l	Monthly	Quarterly
Nitrite as N	0.8	1.0	mg/l	Monthly	Quarterly

⁴⁵ If the total flow in a calendar year exceeded 60 days of flows, the facility shall notify the Groundwater Protection Value Stream per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.2, 3.3, and 3.4. Per Section 2.6.2.2.2 and Compliance Schedule 3.0 item 3.5 for the contingency action concerning exceeding flow limit, until the permit is amended to include groundwater monitoring at POC # 2, all discharges to the EMF will be monitored monthly per this Table.

⁴⁶ AL = Alert Level

⁴⁷ DL = Discharge Limit

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE III
FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK⁴⁸

Pollution Control Structure/Parameter	Performance Level	Inspection Frequency
Pump Integrity	Good working condition	Weekly
Treatment Plant Components	Good working condition	Weekly

⁴⁸ The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. 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 Application dated: May 15, 2019
2. Contingency Plan, dated: July 2019
3. Final Engineering Memo dated: August 5, 2019
4. Final Hydrologist Memo dated: Not applicable
5. Public Notice date: Not applicable

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 on the amount of daily influent or discharge of pollutants in gallons per day (gpd) as established by A.R.S. § 49-242.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 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 (AWQS) at the applicable point of compliance (POC) for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS 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(C), 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; or
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. §§ 49-1009, 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 authorized by this permit.

**6.10 Permit Action: Amendment, Transfer, Suspension, and 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, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Protection Value Stream 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).