

**STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-511220
PLACE ID 143789, LTF 66121
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 City of Cottonwood to operate the Riverfront Water Reclamation Facility located at 1083 East Riverfront Drive, Cottonwood, Arizona, in Yavapai County, over groundwater of the Verde River Valley Basin in Township 16N, Range 3E, Section 27, 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: Riverfront Water Reclamation Facility (WRF)
Facility Address: 1083 East Riverfront Drive
Cottonwood, Arizona, 86326
County: Yavapai
Permitted Flow Rate: 300,000 gallons per day (gpd)
Permittee: City of Cottonwood
Permittee Address: 1480 W Mingus Avenue
Cottonwood, AZ 86326
Facility Contact: Debbie Breitreutz, Regulatory Compliance, Safety and Education Administrator
Emergency Phone No.: (928) 634-3413
Latitude/Longitude: 34° 44' 46.8" N/ 112° 00' 52.25" W
Legal Description: Township 16N, Range 3E, Section 27, NE¼, NW¼, NE¼ Gila and Salt River Baseline and Meridian.

1.2 AUTHORIZING SIGNATURE

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

Signed this _____ day of _____, 2018

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 permittee is authorized to operate Riverfront WRF, a scalping plant with an average monthly flow of 0.3 million gallons per day (mgd). The treatment plant consists of headworks with a rotating belt screen, a manually cleaned bar screen and a compactor, an Aero-Mod biological treatment system including a selector tank, two trains of aeration basins and clarifiers, a sand filter, post equalization tank, two UV disinfection units, a reclaimed water pump station and a 500,000 gallon reclaimed water storage tank.

The treatment plant will have nitrification-de-nitrification capability using Aero-Mod treatment system. The solids from screenings will be hauled off-site for disposal in accordance with state and federal regulations. Waste activated sludge will be removed from the treatment plant by pumping mixed liquor suspended solids from the aeration basins and will be discharged to the City of Cottonwood WWTP #101434 via lift station #3 for further treatment.

The WRF produces reclaimed water meeting Class A+ Reclaimed Water Standards (A.A.C. R18-11, Article 3). The WRF will also be equipped with a chemical feed system. Effluent will be used for beneficial purposes under a valid reclaimed water permit (A.A.C. R18-9 Article 7) or will be recharged through an injection well (IW-1) located at the Fairground Park.

Amendment Description:

The amendment provides for the following changes:

- Changed the number of sand filters from two sand filters to one sand filter.
- Changed the location of the injection well from the facility site to the Fairgrounds Park.
- Changed the location of POC #1 and POC# 2 wells.

The depth to groundwater is approximately 21.5 feet below the WRF and the direction of groundwater flow is towards southeast.

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

Discharging Facilities

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
Riverfront WRF	34° 44' 46.8" N	112° 00' 52.3" W
Fairground Park Injection Well (IW-1)	34° 44' 01.97" N	112° 00' 57.10" 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 is 300,000 gpd. 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 permittee shall maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability is \$271,292.00. 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 shall be 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 shall meet 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 treatment facility was designed as per the design report prepared by Kenneth L. Knickerbocker, P.E., Pineview Consulting, L.L.C., dated September 2015 and subsequent sealed submittals that served as additions to the design report.

2.2.2 Site-specific Characteristics

Not applicable at the time of permit issuance.

2.2.3 Pre-operational Requirements

The permittee shall submit well installation reports per the Compliance Schedule in Section 3.0, to the Groundwater Protection Value Stream for the new injection to Well IW.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the WWTP 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 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) and 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 Areawide Water Quality Management Plan Conformance

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

Facility operations must conform to the approved Certified Areawide 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 treatment facility with a maximum average monthly flow of 0.3 mgd.
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 IA and IB.

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

The Point of Compliance is established at the following locations:

POC #	POC Location	Latitude	Longitude	ADWR #
1 (FP-POC-1)	Downgradient of the Fairgrounds Park Injection Well	34° 43' 59.00" N	112° 00' 55.49" W	55-604220

2 (DMW-1) (Conceptual)	Immediately downgradient of the WRF	34° 44' 45.96" N	112° 00' 52.63" W	55-225185
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Groundwater monitoring is required at the point of compliance wells POC #1 (FP-POC-1) located near the injection well, IW-1. POC #1(FP-POC-1) is designed to monitor groundwater in the same portion of the aquifer as the injection well and is located based upon groundwater flow direction. POC #2 (DMW-1) is designated as a conceptual POC location downgradient of the WRF.

The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-223(G), 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 Applicable.

2.5.2 Discharge Monitoring

The permittee shall monitor the effluent according to the Routine Discharge Monitoring Table in Section 4.2, Table IA. Representative samples of the effluent shall be collected downstream of the UV disinfection unit.

2.5.3 Reclaimed Water Monitoring

In addition to routine discharge monitoring parameters listed in Table IA, reclaimed water monitoring is required. The permittee shall monitor the parameters listed under Table IB, representative samples of the reclaimed water shall be collected downstream of the UV disinfection unit.

2.5.4 Surface Water Monitoring and Sampling Protocols

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

2.5.5 Groundwater Monitoring and Sampling Protocols

Static water level shall be measured and recorded prior to sampling. The wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80 percent of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the SMRF.

As an alternative, the permittee may conduct the sampling using the low-flow purging method as described in the Arizona Water Resources Research Center, March 1995 Field Manual for Water Quality Sampling. The well must be purged until indicator parameters stabilize. Indicator parameters shall include dissolved oxygen, turbidity, pH, temperature, and conductivity.

2.5.5.1 POC Well Replacement

In the event that one or more of the designated POC wells should become unusable or inaccessible due to damage, exceedance of an alert level (AL) for water level as required by Section 2.6.2.3.4, or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is fifty feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well.

2.5.5.2 Ambient Groundwater Monitoring

Eight (8) Monthly groundwater sampling events are required to establish ambient groundwater quality at POC #1 (ADWR # 55-604220). The ambient monitoring constituents are listed in Section 4.2 Table IIA. The permittee shall not use more than eight (8) sample rounds in the calculation. Within 30 days of the receipt of the final ambient groundwater sampling event results the permittee shall submit to the Department an (minor) amendment application, along with copies of all laboratory analytical reports, field notes, QA/QC procedures used in collection and analysis of the samples, and a report including the statistical calculations of the ALs and AQLs for parameters which have an established numeric AWQS. After four sampling events, the permittee may determine to use of the numeric AWQS as the AQL and 80% of the AWQS as the AL and discontinue ambient groundwater monitoring. Upon completion of the ambient monitoring, routine groundwater monitoring shall commence in accordance with Section 4.2, Table IIB.

2.5.5.2.1 Alert Levels for POC Wells

For each of the monitored analytes for which a numeric aquifer water quality standard (AWQS) has been adopted, the AL shall be established as follows:

The ALs shall be established and calculated by the following formula or another valid statistical method submitted to WPS in writing and approved for this permit by the WPS:

ALs shall be calculated for all contaminants with an established numeric AWQS for each of the four POC wells listed on Table 4.X.X. For any new or replacement POC wells, ALs shall be calculated for all contaminants with an established numeric AWQS, as described below.

As per the compliance schedule item No. 2, following receipt of the laboratory analyses for the final month of the ambient groundwater monitoring period for each POC well referenced in Section 4.0, Table 4.2 the permittee shall submit the ambient groundwater data in tabulated form to the Groundwater Protection Value Stream for review. Copies of all laboratory analytical reports, field notes, and the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analyses of the samples for all parameters listed in Section 4.2, Tables IIA, to be established for each POC well, shall be submitted to the Groundwater Protection Value Stream. The permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by ADEQ, or the permittee may defer calculation of the ALs and AQLs by the Groundwater Protection Value Stream. The ALs shall be established and calculated by the following formula, or another valid statistical method submitted to Groundwater Protection Value Stream in writing and approved for this permit by the Groundwater Protection Value Stream:

$$AL = M + K\Phi$$

Where M = mean, S = standard deviation, and K = one-sided normal tolerance interval with a 95% confidence level (Lieberman, G.J. (1958) Tables for One-sided Statistical Tolerance Limits: Industrial Quality Control, Vol XIV, No. 10). Obvious outliers should be excluded from the data used in the AL calculation.

The following criteria shall be met in establishing ALs in the permit:

1. The AL shall be calculated for a parameter using the analyses from a minimum of eight sample events.
2. Any data where the laboratory Practical Quantitation Limit (PQL) exceeds 80% of the AWQS shall not be included in the AL calculation.
3. If a parameter is below the detection limit, the permittee must report the value as “less than” the numeric value for the PQL or detection limit for the parameter, not just as “non-detect”. For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
4. If the analytical results from more than 50% of the samples for a specific parameter are non-detect, then the AL shall be set at 80% of the AWQS.
5. If the calculated AL for a specific constituent and well is less than 80% of the AWQS, the AL shall be set at 80% of the AWQS for that constituent in that well.

2.5.5.2.2 Aquifer Quality Limits for POC Wells

For each of the monitored analytes for which a numeric aquifer water quality standard (AWQS) has been adopted, the AQL shall be established as follows:

1. If the calculated AL is less than the AWQS, then the AQL shall be set equal to the AWQS.
2. If the calculated AL is greater than the AWQS, then the AQL shall be set equal to the calculated AL value, and no AL shall be set for that constituent at that monitoring point.

2.5.5.3 Routine Groundwater Monitoring

Routine groundwater sampling will be required in the POC well upon completing the ambient groundwater sampling. The ALs/AQLs will be set in the routine groundwater sampling based on ADEQ’s evaluation and approval of the proposed ALs/AQLs submitted by the applicant according to the compliance schedule. Upon completion of the ambient groundwater sampling the permittee shall monitor constituents listed in Section 4.2 Table IIB.

2.5.6 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 2.7.3.

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. 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, 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 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 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 (PL) 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 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 its cause;
 - (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 PL 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, Table 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. 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 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

If the AL for average monthly flow in Section 4.2, Table IA, has been exceeded, the permittee shall submit an application to ADEQ for an APP amendment to expand the WRF, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for expansion requires ADEQ approval.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

No ALs have been established for indicator parameters.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

1. In the case of an exceedance of an AL for a pollutant set in Section 4.2, Table IIB, the permittee may conduct verification sampling within five (5) days of becoming aware of the exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling confirms the AL exceedance or if the permittee opts not to perform verification sampling, then the permittee shall increase the

frequency of monitoring for the pollutants set in Section 4.2, Table IIB as follows:

Specified Monitoring Frequency (Section 4.2, Table IIB)	Monitoring Frequency for AL Exceedance
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually	Quarterly

In addition, the permittee shall immediately initiate an investigation of the cause of the AL exceedance, including inspection of all discharging units and all related pollution control devices, review of any operational and maintenance practices that might have resulted in an unexpected discharge, and hydrologic review of groundwater conditions including upgradient water quality.

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 exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Section, that although an AL has been exceeded, pollutants are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Section.
4. Within 30 days after confirmation of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Section along with a summary of the findings of the investigation, the cause of the exceedance, 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 increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 4.2, Table IIB if the results of four sequential sampling events demonstrate that no parameters exceed the AL.
7. If the increased monitoring required as a result of an AL exceedance continues for more than six (6) sequential sampling events, the permittee shall submit a second report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth sampling event.

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

Not required at the time of permit issuance.

2.6.2.3.4 Alert Level for Groundwater Level

Not required at the time of permit issuance.

2.6.3 Discharge Limit Violation

1. If a DL set in Section 4.2, Tables IA or IB, 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. 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 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.

2. The permittee shall comply with the freeboard requirements as specified in Section 4.2, Table III (Facility Inspections) to prevent the overtopping of an impoundment. If an impoundment or sludge drying bed is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.
3. 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 Applicable

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) provided by ADEQ, and submit the completed report 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, and submit the form to the Groundwater Protection Value Stream.
3. The tables contained in Section 4.2 list the monitoring parameters and the frequencies for reporting results on the SMRF:
 - Table IA - Routine Discharge Monitoring
 - Table IB - Reclaimed Monitoring Monitoring
 - Table IIB - Groundwater Quality Monitoring

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

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).

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 an AL exceedance, or violation of any permit condition, AQL, or DL.
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 Table III in the facility log book as per Section 2.7.2, and report to ADEQ any violations or exceedances as per Section 2.7.3.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results and flow volumes to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee; and
2. Any end user who has not waived interest in receiving this information.

2.7.4.1 Injection Well Installation Report(s)

An injection well installation report shall be submitted to ADEQ within ninety (90) days after the installation and completion of Injection Well per the Compliance Schedule #1 in Section 3.0. Each 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 Department 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.

2.7.4.2 Well Installation Report

A well installation report shall be submitted to ADEQ as per 2.5.5.1. 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 ADWR Notice of Intent and all related submittals to ADWR;
- 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;
- 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.

2.7.4.3 Ambient Groundwater Monitoring Report

The permittee shall submit a report of the ambient groundwater monitoring as required in accordance with the Section 3.0, Compliance Schedule items #2. The Ambient Groundwater Monitoring Report (AMGR) shall be submitted for POC #1 and POC #2 that is incorporated into the monitoring program of this permit. The report shall include summary tables of all groundwater quality data collected during the ambient groundwater monitoring period.

Ambient Groundwater Monitoring Report shall include the following:

- depth to groundwater measurements,
- groundwater elevation measurements,
- groundwater flow calculations,
- groundwater contour maps,
- certified laboratory reports,
- field data sheets and an assessment of groundwater flow

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 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

The following table lists the semi-annual and annual report due dates:

Monitoring conducted:	Report due by:
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-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 Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. SMRF reporting is still required during Temporary Cessation.

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.

2.9.1 Closure Plan

Within 90 days following notification of closure or as required in Section 3.0, Compliance Schedule Item No. 41, 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.
6. SMRF submittals are still required until Clean Closure is issued.

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 CSI listed below, the permittee shall submit the required information, including a cover letter that lists the CSIs, to the Groundwater Protection Value Stream.

No.	Description	Due by:	Permit Amendment Required?
1	The permittee shall submit an installation report for the Injection Well per Section 2.7.4.1.	By February 1, 2019.	No
2	Begin eight ambient groundwater monitoring events for well POC #1, as required under Section 4.2, Table IIA.	By December 1, 2018.	No
3	The permittee shall submit an APP amendment application along with Ambient Groundwater Monitoring Report (AMGR) to establish ALs and AQLs for POC #1. The Ambient Groundwater Monitoring Report shall include information per Section 2.7.4.3.	By September 1, 2019 submit a minor amendment application along with AMGR.	Yes
4	The permittee shall begin routine groundwater sampling for POC #1 under Section 4.2, Table IIB.	September 1, 2019.	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IA
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude	
1 – Reuse Flow	Reuse flow meter located downstream of reclaimed water pump station		34° 44' 47.5" N	112° 00' 50.72" W	
2 – Recharge Flow	Recharge flow meter located downstream of reclaimed water pump station		34° 44' 47.57" N	112° 00' 50.74" W	
Parameter	AL ¹	DL ²	Units	Sampling Frequency	Reporting Frequency
Total Flow ³ : Daily ⁴	Not Established ⁵	Not Established	mgd ⁶	Daily	Quarterly
Total Flow: Monthly Average ⁷	Not Established	0.3	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily ⁸	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Monthly Average	Not Established	0.3	mgd	Monthly Calculation	Quarterly
Recharge Flow: Daily ⁹	Not Established	Not Established	mgd	Daily	Quarterly
Recharge Flow: Monthly Average	Not Established	0.3	mgd	Monthly Calculation	Quarterly

¹ AL = Alert Level

² DL = Discharge Limit

³Total flow for all methods of disposal (Reuse and Recharge)

⁴Total Flow is a sum of reuse flow and recharge flow

⁵Not Established means monitoring is required but no limits are specified.

⁶mgd = million gallons per day

⁷Monthly = Calculated value; average of daily flow values in a month.

⁸Reuse flow shall be measured using a continuous recording flow meter which totals the flow daily.

⁹Recharge flow shall be measured using a continuous recording flow meter which totals the flow daily.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING (continued)

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
3	Downstream of the UV disinfection unit		34° 44' 46.5" N		112° 00' 51.4" W
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Nutrients and Pathogens:					
<i>E. coli</i> : Single sample maximum	No Limit	23.0	MPN ¹⁰	Daily ¹¹	Quarterly
<i>E. coli</i> : four (4) of seven (7) samples in a week ¹²	Non-detect	Non-detect ¹³	MPN	Weekly Calculation	Quarterly
Total Nitrogen ¹⁴ : Five-sample rolling geometric mean	8.0	10.0	mg/l	Monthly Calculation ¹⁵	Quarterly
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

¹⁰MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.

¹¹For *E. coli*, "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 samples in each week are obtained and analyzed.

¹²Week means a seven-day period starting on Sunday and ending on the following Saturday. The reporting form for this parameter consists of 13 weeks per quarter.

¹³*E. coli* 4 of 7 samples requires entering "Compliance" or "Non-compliance" on the SMRF for each week of the reporting period. Evaluate the daily *E. coli* results for that week (Sunday through Saturday). If, of these seven days, four or more of the daily *E. coli* results are non-detect, report "Compliance" for that week's entry on the SMRF. If three or fewer of the daily *E. coli* results are non-detect, report "Non-compliance" for that week's entry on the SMRF.

¹⁴Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

¹⁵A five-month geometric mean of the results of the five (5) most recent samples

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) ¹⁶	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

¹⁶Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS A+¹⁷

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
3	Downstream of the UV disinfection unit		34° 44' 46.5" N	112° 00' 51.4" W
Parameter	DL ¹⁸	Units	Sampling Frequency	Reporting Frequency
<i>E. coli</i> : Single-sample maximum	15.0	MPN ¹⁹	Daily ²⁰	Quarterly
<i>E. coli</i> : Four (4) of last seven (7) samples	Non-detect ²¹	MPN	Daily Evaluation	Quarterly
Total Nitrogen ²² : Five-sample rolling geometric mean ²³	10.0	mg/l ²⁴	Monthly Calculation	Quarterly
Turbidity ²⁵ : Single reading	5.0	NTU ²⁶	Everyday ²⁷	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly

¹⁷ Reclaimed water monitoring under Table IB shall be performed in addition to routine discharge monitoring required under Section 4.2, Table IA.

¹⁸ DL = discharge limit

¹⁹MPN = Most Probable Number per 100 ml. For MPN, a value of <2.2 shall be considered to be non-detect.

²⁰For *E. coli*, “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.

²¹Requires entering “Compliance” or “Non-compliance” on the SMRF for each day of the reporting period. Evaluate the daily *E. coli* result along with the six (6) previous sample results. If four (4) or more of those results are non-detect, report “Compliance” for that day’s entry on the SMRF. If four (4) or more of those results have detections of *E. coli*, report “Non-compliance” for that day’s entry.

²² Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)

²³The 5-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together then taking the fifth root of the product. Example: $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

²⁴ mg/l = milligrams per liter.

²⁵ Turbidimeter 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.

²⁶ Nephelometric Turbidity Units

²⁷ For the single turbidity reading, “everyday” means the maximum reading during the 24 hour period.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IIA²⁸
AMBIENT GROUNDWATER MONITORING

Sampling Point Number	Sampling Point Identification	Latitude	Longitude
4	POC #1 - Downgradient of the Fairgrounds Park Injection Well, ADWR Well Registration #55-604220	34° 43' 59.00" N	112° 00' 55.49" W
Parameter	Units	Sampling Frequency	Reporting Frequency
Depth to Water	feet bgs	Monthly	AGMR ²⁹
Total Nitrogen ³⁰ :	mg/l	Monthly	AGMR
Nitrate-Nitrite as N	mg/l	Monthly	AGMR
Nitrate as N	mg/l	Monthly	AGMR
Nitrite as N	mg/l	Monthly	AGMR
Total Kjeldahl Nitrogen (TKN)	mg/l	Monthly	AGMR
Total Coliform	P/A ³¹	Monthly	AGMR
Metals (Total):			
Antimony	mg/l	Monthly	AGMR
Arsenic	mg/l	Monthly	AGMR
Barium	mg/l	Monthly	AGMR
Beryllium	mg/l	Monthly	AGMR
Cadmium	mg/l	Monthly	AGMR
Chromium	mg/l	Monthly	AGMR
Cyanide (as free cyanide)	mg/l	Monthly	AGMR
Fluoride	mg/l	Monthly	AGMR
Lead	mg/l	Monthly	AGMR
Mercury	mg/l	Monthly	AGMR
Nickel	mg/l	Monthly	AGMR
Selenium	mg/l	Monthly	AGMR
Thallium	mg/l	Monthly	AGMR

²⁸The permittee shall cease monitoring under this table (Table IIA) and commence monitoring under Table IIB after collecting the eight rounds of ambient groundwater samples, as per Section 3.0, Compliance Schedule Item #4.

²⁹AGMR= Ambient Groundwater Monitoring Report – The report shall be submitted per Section 2.7.4.3.

³⁰Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.

³¹P/A = Presence or absence of total coliforms in a 100-milliliter sample.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IIA
AMBIENT GROUNDWATER MONITORING (continued)

Parameter	Units	Sampling Frequency	Reporting Frequency
Benzene	mg/l	Once	AGMR ³²
Carbon tetrachloride	mg/l	Once	AGMR
o-Dichlorobenzene	mg/l	Once	AGMR
para-Dichlorobenzene	mg/l	Once	AGMR
1,2-Dichloroethane	mg/l	Once	AGMR
1,1-Dichloroethylene	mg/l	Once	AGMR
cis-1,2-Dichloroethylene	mg/l	Once	AGMR
trans-1,2-Dichloroethylene	mg/l	Once	AGMR
Dichloromethane	mg/l	Once	AGMR
1,2-Dichloropropane	mg/l	Once	AGMR
Ethylbenzene	mg/l	Once	AGMR
Hexachlorobenzene	mg/l	Once	AGMR
Hexachlorocyclopentadiene	mg/l	Once	AGMR
Monochlorobenzene	mg/l	Once	AGMR
Styrene	mg/l	Once	AGMR
Tetrachloroethylene	mg/l	Once	AGMR
Toluene	mg/l	Once	AGMR
Trihalomethanes (total) ³³	mg/l	Once	AGMR
1,1,1-Trichloroethane	mg/l	Once	AGMR
1,2,4 - Trichlorobenzene	mg/l	Once	AGMR
1,1,2 - Trichloroethane	mg/l	Once	AGMR
Trichloroethylene	mg/l	Once	AGMR
Vinyl Chloride	mg/l	Once	AGMR
Xylenes (Total)	mg/l	Once	AGMR

³²AGMR= Ambient Groundwater Monitoring Report – The report shall be submitted per Section 2.7.4.3.

³³Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIB
GROUNDWATER MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
4	POC #1 - Downgradient of the Fairgrounds Park Injection Well, ADWR Well Registration #55-604220			34° 43' 59.00" N	112° 00' 55.49" W
Parameter	AL ³⁴	AQL ³⁵	Units	Sampling Frequency	Reporting Frequency
Depth to Water	50	NA	feet bgs	Monthly	Quarterly
Total Nitrogen ³⁶ :	Reserved ³⁷	Reserved	mg/l ³⁸	Monthly Calculation	Quarterly
Nitrate-Nitrite as N	Reserved	Reserved	mg/l	Monthly Calculation	Quarterly
Nitrate as N	Reserved	Reserved	mg/l	Monthly	Quarterly
Nitrite as N	Reserved	Reserved	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Reserved	Reserved	mg/l	Monthly	Quarterly
Total Coliform	Absence	Absence	P/A ³⁹	Monthly	Quarterly
Metals (total):					
Antimony	Reserved	Reserved	mg/l	Quarterly	Quarterly
Arsenic	Reserved	Reserved	mg/l	Quarterly	Quarterly
Barium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Beryllium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Cadmium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Chromium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	Reserved	Reserved	mg/l	Quarterly	Quarterly
Fluoride	Reserved	Reserved	mg/l	Quarterly	Quarterly
Lead	Reserved	Reserved	mg/l	Quarterly	Quarterly
Mercury	Reserved	Reserved	mg/l	Quarterly	Quarterly
Nickel	Reserved	Reserved	mg/l	Quarterly	Quarterly
Selenium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Thallium	Reserved	Reserved	mg/l	Quarterly	Quarterly

³⁴AL = Alert Level

³⁵AQL = Aquifer Quality Limit

³⁶The calculation for Total Nitrogen is Nitrate as N plus Nitrite as N plus TKN.

³⁷Reserved = Monitoring is required but no limits have been established. ALs and AQLs shall remain reserved until the submission of the ambient groundwater quality report.

³⁸mg/l = milligrams per liter

³⁹P/A = Presence or absence of total coliforms in a 100-milliliter sample. If total coliforms are present, enter "Non-compliance" on the SMRF. If total coliforms are absent, enter "Compliance" on the SMRF.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IIB
GROUNDWATER MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Styrene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Toluene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) ⁴⁰	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	Reserved	Reserved	mg/l	Semi-Annually	Semi-Annually

⁴⁰Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE III
FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK⁴¹

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

⁴¹ 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 Amendment Application, dated: May 16, 2018
2. Contingency Plan, dated: October 23, 2015
3. Final Hydrologist Memo, dated: July 23, 2018
4. Final Engineering Memo, dated: September 4, 2018
5. Financial Review Memo, dated: NA
5. Public Notice, dated: TBD
6. Public Hearing, dated: Not applicable
7. Responsiveness Summary, dated: 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 upon 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 AWQS at the applicable 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).