

STATE OF ARIZONA  
AQUIFER PROTECTION PERMIT NO. P-100573  
PLACE ID 970, LTF 78565  
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 Avondale to operate the City of Avondale Charles M. Wolf Water Reclamation Facility (WRF) located at 4800 S. Dysart Road in Avondale in Maricopa County, Arizona, over groundwater of the Phoenix Active Management Area in Township 1N, Range 1W, 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:** City of Avondale Charles M. Wolf Water Reclamation Facility (WRF)  
**Facility Address:** 4800 S. Dysart Road  
Avondale, Arizona, 85323  
**County:** Maricopa  
**Permitted Flow Rate:** 9,000,000 gallons per day (gpd)  
**Permittee:** City of Avondale  
**Permittee Address:** 399 East Lower Buckeye Road  
Avondale, Arizona 85323  
**Facility Contact:** Lacey James, Water Resources Manager  
**Emergency Phone No.:** (623) 333-4447  
**Latitude/Longitude:** 33°23' 56" N/ 112°21' 07" W  
**Legal Description:** Township 01N, Range 01W, Section 27, Gila and Salt River Baseline and Meridian

### 1.2. AUTHORIZING SIGNATURE

\_\_\_\_\_  
**Trevor Baggione, Manager, Groundwater Protection Value Stream**  
Water Quality Division  
Arizona Department of Environmental Quality  
Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

**THIS AMENDED PERMIT SUPERCEDES ALL PREVIOUS PERMITS**

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**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 a 9.0 million gallons per day (mgd) Wastewater Reclamation Facility (WRF). The WRF treatment process consists of an influent lift station, headworks with fine screen and grit removal, two (2) primary clarifiers, one (1) equalization basin, four (4) aeration basins, four (4) secondary clarifiers, and two (2) chlorine contact basins. The WRF is classified as producing Class B+ reclaimed water pursuant to A.A.C. R18-11, Article 3. The sludge is digested anaerobically in two (2) digesters, thickened and dewatered prior to hauling off-site for disposal in accordance with State and Federal regulations.

Effluent may be disposed for beneficial purposes under a valid reclaimed water permit or may be discharged to the City of Avondale McDowell Recharge Basins permitted under APP #105889 or to the Agua Fria River under AZPDES permit no. AZ0023281 located approximately 0.5 miles west of the WRF in the Agua Fria River.

The depth to groundwater beneath the WRF is approximately 20 to 30 feet below ground surface, and generally groundwater flows to the west-southwest.

The purpose of this amendment is to amend the Aquifer Quality Limits (AQLs) for the Nitrogen species except for Nitrite as N, change Total Nitrogen monitoring to limits not established. In addition change pathogen monitoring in the Groundwater Monitoring Table from Total Coliform to *E.coli*.

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 site includes the following permitted discharging facilities*

*Table 1: DISCHARGING FACILITIES*

<b>Table 1 Discharging Facilities</b>		
<b>Facility</b>	<b>Latitude</b>	<b>Longitude</b>
WRF	33° 24' 01" N	112° 20' 36" W
Agua Fria River Outfall	33° 23' 57.22" N	112° 21' 10.7" W

**2.1.1. 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 annual registration fee flow rate is established in permit Section 1.1. If the facility is not constructed or is incapable of discharge, the permittee may be eligible for reduced fees pursuant to A.A.C. R18-14-104(A)(Table 2). Send all correspondence requesting reduced fees to the Groundwater Protection Value Stream. Please reference the permit number, LTF number, and the reason for requesting reduced fees under the rule.

**2.1.2. Financial Capability**

[A.R.S. § 49-243(N) and A.A.C. R18-9-A203 ]

This facility is a city municipality and has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203(B)(1) and (2). The permittee shall maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability for closure is \$866,674.00.

**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 was 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)(i).

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 original WRF was designed by Brown & Caldwell Consulting Engineers. Subsequent modifications to the WRF in 2003 were designed by Black & Veatch. The upgrades approved in the permit amendment in 2009 were designed by Damon S. Williams Associates, LLC. Design documents submitted for the 2009 and 2018 permit amendments have been signed and sealed by Leonel I Almanzar-Michli, P.E., CDM Smith.

**2.2.2. Site-Specific Characteristics**

Site specific characteristics were not used to determine BADCT.

**2.2.3. Pre-Operational Requirements**

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per Section 3.0 Compliance Schedule, Item #1. The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the new WRF additions are constructed according to the Department-approved design report or plans and specifications, as applicable.

**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 11.
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-B701(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class B+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class 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 WRF with a maximum average monthly flow of 9.0 mgd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. 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.
4. Specific discharge limitations are listed in Section 4.2, Table 8.

**2.4. POINT OF COMPLIANCE (POC)**

[A.R.S. § 49-244]

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

*Table 2: POINT(S) OF COMPLIANCE*

<b>Table 2 Point(s) of Compliance</b>			
<b>POC #</b>	<b>POC Location</b>	<b>Latitude (North)</b>	<b>Longitude (West)</b>
1 (Conceptual)	POC #1 (not installed)-located approximately 700 feet west of the (new) clarifiers.	33° 24' 02" N	112°20'52.6" W
2 (POC #2)	POC #2 (installed)-located approximately 25 feet south of the AZPDES outfall	33°23'56.97" N	112°21'10.8" W
3 (Conceptual)	POC #3 (not installed)-located within the DIA of the AZPDES outfall, approximately 2000 feet south of the AZPDES outfall at the Agua Fria River.	33° 23' 32" N	112° 21' 15" W

Groundwater monitoring is required at the Point of Compliance (POC) Well #2. Monitoring under conceptual POC well #3 is required if the flows to the AZPDES discharge exceeds 8.5 mgd for three (3) consecutive months, or flows exceed 8.5 mgd for a combined total of six (6) months in any 12 month period as per Section 3.0, compliance schedule items #2 and #3. POC Well #1 is conceptual; groundwater monitoring is not required at the POCs at permit issuance.

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 applicable.

**2.5.2. Routine Discharge Monitoring**

Routine Discharge Monitoring shall be conducted according to Section 4.2, Table 8. Flow shall be measured at the flow meter located downstream of the Clarifiers at Sampling Point 1 and representative samples of the wastewater be collected at the flow meter located at the line going to the effluent discharge at Sampling Point 2.

**2.5.3. Reclaimed Water Monitoring**

The permittee shall monitor the parameters listed under Table 9 in addition to the routine discharge monitoring parameters listed in Table 8 if the permittee decides to reuse the reclaimed water under a valid reclaimed water permit. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent pump.

**2.5.4. Facility / Operational Monitoring**

Operational monitoring inspections shall be conducted according to Section 4.2, Table 11.

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**

Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, 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.

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.

As a third alternative method for sampling within POC wells with very low recharge rates, the permittee may conduct the sampling using no-purge sampling techniques using HydraSleeve™ or similar type methodology. The use of HydraSleeve™ or similar type samplers shall follow accepted EPA, USGS, and DOD protocols. In addition, the HydroSleeve™ or similar type sampler shall be placed just below the water table.

**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(2), 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.

**2.5.6. 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. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable 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. 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 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, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

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. 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. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit.



## 2.6.2. Exceeding Of Alert Levels And Performance Levels

### 2.6.2.1. Exceeding Of Performance Levels Set For Operational Conditions

If an operational performance level set in Section 4.2, Table 11 has been exceeded the permittee shall:

1. Notify the Groundwater Protection Value Stream within five (5) days of becoming aware of the exceedance.
2. 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:
  - a. A description of the exceedance and the cause of the exceedance;
  - b. 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;
  - c. 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;
  - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
  - e. Any malfunction or failure of pollution control devices or other equipment or process.
3. 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, Table 8 has been exceeded, 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 exceedance;
  - 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 exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameter(s) in question, if necessary to identify the cause of the exceedance.
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 the AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
3. Within thirty 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 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 8 has been exceeded, the permittee shall submit an application for an APP amendment to expand the treatment facility or submit a report detailing the reasons an expansion is not necessary.

**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 10, the permittee may conduct verification sampling for those pollutant(s) that exceeded their respective AL(s) 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 each pollutant exceeding its' respective AL(s) as follows:

*Table 3: ACCELERATED MONITORING - ALERT LEVEL EXCEEDANCE*

<b>Table 3 Accelerated Monitoring – Alert Level Exceedance</b>	
<b>Specified Monitoring Frequency</b>	<b>Monitoring Frequency for AL Exceedance</b>
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 Protection Value Stream, that although an AL has been exceeded, the pollutant(s) that exceeded their respective AL(s) are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency, for those pollutant(s) that exceeded their respective AL(s), for approval in writing by the Groundwater Protection Value Stream.
4. Within 30 days after confirmation of an AL exceedance, for each pollutant that exceeded an AL, 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 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. For each pollutant that exceeded an AL, the increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 4.2, Table 10 if the results of four sequential sampling events of those pollutants demonstrate that they did not 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 to ADEQ a second report documenting an investigation of each pollutant which continued to exceed an AL. This report is due 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 time of issuance.

**2.6.2.3.4. Alert Level For Groundwater Level**

1. If monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2, Table 10, the permittee shall submit a written report to the Groundwater Protection Value Stream within 30 days after becoming aware of the exceedance. The report shall document the following:
  - a. The as-built configuration of the well including the screened interval;
  - b. All groundwater level measurements available for the well;
  - c. A discussion and analysis of any trends or seasonal variations in the groundwater level measurements;
  - d. Information on groundwater recharge, withdrawal, or other hydrologic conditions in the vicinity of the well, and;
  - e. Any other pertinent information obtained by the permittee.
2. If monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2, Table 10 for more than three sequential sampling events, the permittee shall submit a second report which evaluates the cause(s) of the exceedance and recommends whether the well should be replaced pursuant to Section 2.5.5.1. The report shall discuss and demonstrate whether samples representative of the water quality of the relevant aquifer can be practicably obtained from the well.
3. Upon review of the submitted report, the Department may amend the permit to require replacement of the well, require additional permit conditions, or other actions.

**2.6.3. Discharge Limit Violation**

1. If a DL set in Section 4.2, Table 8 and Table 9 have 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**

- 1. If an AQL set in Section 4.2, Table 10 has been exceeded, the permittee may conduct verification sampling for those pollutant(s) that were above their respective AQL(s) 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 does not confirm an AQL violation, no further action is needed under this Section.
- 3. If verification sampling confirms that an AQL was violated for any parameter or if the permittee opts not to perform verification sampling, then, the permittee shall increase the frequency of monitoring for those parameters as follows:

*Table 4: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION*

<b>Table 4 Accelerated Monitoring – Aquifer Quality Limit Violation</b>	
<b>Specified Monitoring Frequency</b>	<b>Monitoring Frequency for AQL Violation</b>
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually	Quarterly

In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.

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. A verified exceedance of an AQL will be considered a violation unless the permittee demonstrates within 30 days that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, 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.

1. 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.

**2.6.5. Emergency Response And Contingency Requirements For Unauthorized Discharges**

[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 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
  - a. Table 8: ROUTINE DISCHARGE MONITORING
  - b. Table 9: RECLAIMED WATER MONITORING
  - c. Table 10: GROUNDWATER MONITORING

The parameters listed in the above-identified tables from Section 4.0 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 shift 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 (by mail or by email - see Section 2.7.5) within five (5) 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 for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
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 11 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.

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-B701(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.

**2.7.5. 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  
 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:

*Table 5: QUARTERLY REPORTING DEADLINES*

<b>Table 5 Quarterly Reporting Deadlines</b>	
<b>Monitoring Conducted During Quarter:</b>	<b>Quarterly Report Due By:</b>
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:

*Table 6: (SEMI-)ANNUAL REPORTING DEADLINES*

<b>Table 6 (Semi-)Annual Reporting Deadlines</b>	
<b>Monitoring Conducted:</b>	<b>Report Due By:</b>
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 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 or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
3. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(30) and Title 49, Chapter 2, Article 3;
4. Further action is necessary to meet property use restrictions.
5. 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]

Unless otherwise indicated, for each compliance schedule item listed below, the permittee shall submit the required information to the Groundwater Protection Value Stream.

*Table 7: COMPLIANCE SCHEDULE ITEMS*

<b>Table 7 Compliance Schedule Items</b>			
<b>No.</b>	<b>Description</b>	<b>Due By:</b>	<b>Permit Amendment Required?</b>
1	The permittee shall submit a signed, dated, and sealed Engineer’s Certificate of Completion in a format approved by the Department that confirms that the new WRF additions are constructed according to the Department-approved design report or plans and specifications, as applicable.	Prior to using the added upgrades and within 90 days of completion of construction.	No
2	If flow exceeds 8.5 mgd for three (3) consecutive months, or flows exceed 8.5 mgd for a combined total of six (6) months in any 12 month period at AZPDES discharge point a monitoring well, POC #3, shall be installed. The permittee shall submit an amendment application along with the proposed well design to conduct monitoring at POC #3. The location of monitoring well at POC #3 has already been established.	Within 60 days after the results are known.	Yes
3	Install POC well #3 and begin groundwater monitoring	Within 210 days of submitting the permit amendment.	Yes

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 8: ROUTINE DISCHARGE MONITORING

TABLE 8 ROUTINE DISCHARGE MONITORING					
Sampling Point Number	Sampling Point Identification	Latitude (North)		Longitude (West)	
1 <sup>1</sup>	Flow meter located downstream of the Clarifiers.	33°23'59.86" N		112°20'38.5" W	
2 <sup>2</sup>	Effluent pump station	33°23'59" N		112°20'41" W	
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Flow <sup>3</sup> : Daily <sup>4</sup>	Not Established <sup>5</sup>	Not Established	mgd <sup>6</sup>	Daily	Quarterly
Total Flow: Average Monthly <sup>7</sup>	8.5	9.0	mgd	Monthly	Quarterly
Flow AZPDES: Daily	Monitor	Monitor	mgd	Daily	Quarterly
Total Flow: AZPDES Average Monthly	8.5	9.0	mgd	Monthly	Quarterly
Flow McDowell Recharge Basins: Daily	Monitor	Monitor	mgd	Daily	Quarterly
Total Flow McDowell Recharge Basins: Average Monthly	8.5	9.0	mgd	Monthly Calculation	Quarterly
Total Flow: Daily to reuse	Monitor	Monitor	mgd	Daily	Quarterly
Total Flow: Average monthly to reuse	Monitor	Monitor	mgd	Monthly Calculation	Quarterly
Fecal Coliform: Single Sample maximum	Not Established	23.0	MPN <sup>8</sup>	Daily <sup>9</sup>	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week <sup>10</sup>	Not Established	Non-detect <sup>11</sup>	MPN	Daily	Quarterly
Total Nitrogen <sup>12</sup> : Five-sample rolling geometric mean <sup>13</sup>	8.0	10.0	mg/l <sup>14</sup>	Monthly	Quarterly

<sup>1</sup> Flow shall be measured at this sampling point

<sup>2</sup> Sampling for all other constituents shall be conducted at this sampling point

<sup>3</sup> Total flow for all methods of disposal (Recharge Basins, AZPDES, Reuse)

<sup>4</sup> Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily

<sup>5</sup> Not Established means that monitoring is required, but no limits have been specified.

<sup>6</sup> mgd = million gallons per day

<sup>7</sup> Monthly Average means the calculated average of daily flow values in a month (McDowell Recharge Basins + AZPDES).

<sup>8</sup> MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.

<sup>9</sup> For fecal coliform, “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.

<sup>10</sup> Week means a seven-day period starting on Sunday and ending on the following Saturday

<sup>11</sup> If at least four (4) of seven (7) samples in a week are non-detect, report “yes” in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of fecal coliform, report “no” in the appropriate space on the SMRF (indicating that the standard has not been met).

<sup>12</sup> Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

<sup>13</sup> A five-month geometric mean of the results of the five (5) most recent samples

<sup>14</sup> mg/l = milligrams per liter

**TABLE 8  
ROUTINE DISCHARGE MONITORING (continued)**

Sampling Point Number	Sampling Point Identification		Latitude (North)		Longitude (West)
2	Effluent pump station		33°23'59" N		112°20'41" W
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
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
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) <sup>15</sup>	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

<sup>15</sup> Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane

Table 9: RECLAIMED WATER MONITORING

TABLE 9 RECLAIMED WATER MONITORING TABLE – CLASS B+16				
Sampling Point Number	Sampling Point Identification		Latitude (North)	Longitude (West)
2	Effluent Pump Station		33° 23' 59"	112° 20' 41"
Parameter	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen <sup>17</sup> : Five-sample rolling geometric mean <sup>18</sup>	10.0	mg/l <sup>19</sup>	Monthly Calculation	Quarterly
Fecal Coliform Single-sample maximum:	800	MPN <sup>20</sup>	Daily <sup>21</sup>	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	200 <sup>22</sup>	MPN	Daily Evaluation	Quarterly

<sup>16</sup> Reclaimed water monitoring under Table 9 shall be performed in addition to routine discharge monitoring required under Section 4.2, Table 8.

<sup>17</sup> Total Nitrogen is the sum of Nitrate as N, Nitrite as N, and Total Kjeldahl Nitrogen (TKN)

<sup>18</sup> The five-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:  $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

<sup>19</sup> mg/l = milligrams per liter

<sup>20</sup> MPN = Most Probable Number per 100 ml. For MPN, a value of <2.2 shall be considered to be non-detect.

<sup>21</sup> For fecal coliform, “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.

<sup>22</sup> If at least four of the last seven samples are equal to or less than 200 MPN per 100 ml, report “yes” in the appropriate space on the SMRF (indicating that the standard has been met). If at least four of the last seven samples are greater than 200 MPN per 100 ml, report “no” in the appropriate space on the SMRF (indicating that the standard has not been met).

Table 10: GROUNDWATER MONITORING

TABLE 10 GROUNDWATER MONITORING					
Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
3	POC #2 Approximately 25 feet south of the AZPDES outfall in the Agua Fria River. Approximately 0.5 miles west of the WRF			33° 23' 56.97" N	112° 21' 10.8" W
Parameter	Alert Level	Aquifer Quality Limit	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen <sup>23</sup> :	13.97	Not Established <sup>24</sup>	mg/l <sup>25</sup>	Monthly Calculation	Quarterly
Nitrate-Nitrite as N	Not Established	13.97	mg/l	Monthly Calculation	Quarterly
Nitrate as N	Not Established	13.97	mg/l	Monthly	Quarterly
Nitrite as N	0.8	1.0	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Not Established	Not Established	mg/l	Monthly	Quarterly
E. Coli	Not Established	Non-detect <sup>26</sup>	MPN <sup>27</sup>	Monthly	Quarterly
Depth to water <sup>28</sup>	<0 or >50	Not Established	Feet bgs <sup>29</sup>	Monthly	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

<sup>23</sup> Total Nitrogen is the sum of Nitrate as N, Nitrite as N, and Total Kjeldahl Nitrogen (TKN)

<sup>24</sup> Not Established means monitoring is required, but no limits are specified.

<sup>25</sup> mg/l = milligrams per liter

<sup>26</sup> Non-detect – For MPN, a value of <2.2 shall be considered to be non-detect

<sup>27</sup> MPN = Most Probable Number per 100 ml

<sup>28</sup> See Section 2.6.2.3.4.

<sup>29</sup> Feet bgs = Feet below ground surface

**TABLE 10  
GROUNDWATER MONITORING (continued)**

Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
3	POC #2 Approximately 25 feet south of the AZPDES outfall in the Agua Fria River. Approximately 0.5 miles west of the WRF			33° 23' 56.97" N	112° 21' 10.8" W
Parameter	Alert Level	Aquifer Quality Limit	Units	Sampling Frequency	Reporting Frequency
<b>Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)</b>					
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) <sup>30</sup>	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

<sup>30</sup> Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane



Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING

<b>TABLE 11</b> <b>FACILITY INSPECTION AND OPERATIONAL MONITORING</b>		
<p>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.</p>		
Pollution Control Structure/Parameter	Performance Level	Inspection Frequency
Pump Integrity	Good working condition	Weekly
Integrity of concrete tanks and channels treatment plant components	No visible damage	Monthly
Surface water diversion structures	No structural damage, no obstructions	Monthly

**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:

- APP Application, dated: February 10, 2020 (significant amendment)
- Final Hydrologist Report, dated: 3/26/2020
- Final Engineering Report, dated: NA
- Public Notice, dated: TBD
- Public Hearing, dated: TBD
- Responsiveness Summary, dated: TBD

**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).