

**STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-105401
PLACE ID 19869, LTF 64507
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 Peoria- Butler Drive Water Reclamation Facility, located at the northwest corner of Butler Drive and 79th Avenue, in Peoria, Arizona (Maricopa County), over groundwater of the Salt River Valley Groundwater Basin, in the Phoenix Active Management Area (AMA), in Township 03 N, Range 01 E, Section 35, NE, SE, NW 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 Peoria- Butler Drive Water Reclamation Facility
Facility Address: 8660 N. 79th Avenue
Peoria, Arizona 85345
County: Maricopa
Permittee: City of Peoria
Permittee Address: 8401 W. Monroe Street
Peoria, Arizona 85345
Permitted Flow Rate: 11,500,000 gallons per day (gpd)
Facility Contact: Wastewater Facilities Manager
Emergency Phone No.: (623) 773-7982
Latitude/Longitude: 33° 33' 43" N / 112° 13' 45" W
Legal Description: Township 03 N, Range 01 E, Section 35, NE, SE, NW of the Gila and Salt River Baseline and Meridian

1.2 AUTHORIZING SIGNATURE

Trevor Baggio, Director, Water Quality Division
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 an 11.5 million gallons per day (MGD) water reclamation facility (WRF), based on a maximum monthly average. The WRF treatment process consists of an influent pump station, a headworks facility that includes grit removal and fine screens, activated sludge secondary treatment with denitrification, membrane filtration, and ultraviolet disinfection. Sludge from the aeration basins will be thickened by using a polymer and dewatered in centrifuges. The dewatered sludge will be discharged to roll-off type transport containers, and ultimately disposed off-site.

The effluent may be used under a valid reclaimed water permit or discharged to the New River under emergency conditions as regulated under AZPDES permit No. AZ0025119. The effluent may be conveyed to the off-site Salt River Project (SRP) New River-Agua Fria River Underground Storage project (NAUSP) for recharge under APP permit No. P-105479. Effluent may also be directed to a new ASR well (ASR-1), installed at the Butler Drive WRF. The permittee may amend this permit to discharge effluent off-site for future recharge using vadose zone wells located within the City limits or to Aquifer Storage and Recovery wells, under a separate permits

ADEQ reviewed and approved the addition of a new ASR-1 well as a new discharge point.

The depth to groundwater is approximately 180 feet below the recharge facility and the direction of groundwater flow is to the northwest.

Facility	Latitude	Longitude	Screen Intervals (ft, bls)
WRP	33° 33' 43" N	112° 13' 45" W	NA
AZPDES Discharge	33° 33' 06.10" N	112° 16' 28.47" W	NA
ASR- 1 Well	33° 33' 44.73" N	111° 13' 53.30" W	460-910

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 11,500,000 gallons per day (gpd). The Permittee shall notify ADEQ of any change in facility contact information according to Section 2.7.7.

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is \$159,600.00. 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 Water Reclamation Facility has been designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204.

Underground storage and recovery projects are exempt from BADCT as per A.A.C. R18-9-A201(C). The treatment facilities supplying the effluent for recharge under this permit have APPs and meet BADCT requirements.

The facility shall meet the requirements for the pretreatment program by conducting monitoring as per: R18-9-B204(B)(6)(b)(ii). All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

2.2.1 Engineering Design

The Aquifer Storage and Recovery (ASR) wellhead was designed as per the design prepared and stamped, dated, and signed (sealed) by Donald Hanson, R.G. (Registered Geologist) Clear Creek Associates, LLC,

dated April 16, 2018. The WRF was designed as per the design report prepared by Black & Veatch dated February, 2005.

2.2.2 Site-specific Characteristics
Not Applicable.

2.2.3 Pre-operational Requirements
Not required at time of permit issuance.

2.2.4 Operational Requirements

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

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

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) 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 Area-wide Water Quality Management Plan Conformance
[A.A.C. R18-9-A201(B)(6)(a)]

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

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

1. The permittee is authorized to operate the WRF with a maximum average monthly flow of 11.5 mgd.
 - 1.468 mgd groundwater recharge to the ASR-1 well.
 - 10.0 mgd total flow to either the NAUSP recharge, or reuse.
 - Treated effluent discharge to the New River is under emergency conditions under an AZPDES permit is limited to total flow in a calendar year of 300 million gallons (mg) per year (10.0 mgd, yearly average flow, x 30 days).
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 of Compliance (POC) [A.R.S. § 49-244]

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

POC #	POC Location	Latitude	Longitude	ADWR #
1	Approximately 210 feet downgradient of ASR- Well	33° 33' 44" N	112° 13' 57" W	55-225723
2	Northwest corner of the WRF (Conceptual Well)	33° 33' 46" N	112° 13' 54" W	TBD
3	Within 750 feet of the discharge point into the New River (Conceptual Well)	33° 31' 52" N	112° 31' 17" W	TBD

Routine groundwater monitoring is required at POC Well # 1 to monitor the aquifer within the zone of aquifer injection by the ASR wells. Groundwater monitoring is not required at the Conceptual POC Wells #2 and #3, except as a contingency action.

Piezometer Well

PZ #	POC Location	Latitude	Longitude	ADWR #
1	Approximately 75 feet Northwest of the ASR-1 Well	33° 33' 45" N	112° 13' 54" W	55-916665

Water level monitoring is required at well BD-PZ-1 to monitor the water level within the screened interval with the AL set at 50 ft-bgs. Water levels shall be monitored quarterly and recorded in the logbook.

Well Type	Wells	ADWR Number	Well Depth (ft)	Screen Interval (ft bgs)
Recharge Well	BD-ASR-1	55-226644	920	460-910
POC Well	BD-POC-1	55-225723	910	460-910
Piezometer	BD-PZ-1	55-916665	180	40-175

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. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

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

2.5.1 Pre-Operational Monitoring

Not required under the terms of this permit.

2.5.2 Routine Discharge Monitoring

The permittee shall monitor the wastewater on a routine basis according to Section 4.2, Table IA. Representative samples of the wastewater shall be collected at the point of discharge from the ultra violet disinfection channel. In addition contingency discharge monitoring shall be conducted as per Table IC if the flow limit to the New River outfall is exceeded, as described in Section 2.6.2.1.1.

2.5.3 Reclaimed Water Monitoring

The permittee shall monitor reclaimed water on a routine basis according to Section 4.2, Table IB. The treatment facility is rated to produced 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).

2.5.4 Facility / Operational Monitoring

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

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

2.5.5 Groundwater Monitoring and Sampling Protocols

The permittee shall monitor the groundwater according to Section 4.2, Table II.

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.

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.

2.5.6 Surface Water Monitoring and Sampling Protocols

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

2.5.7 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

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

2.5.8 Installation and Maintenance of Monitoring Equipment

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

2.6 Contingency Plan Requirements

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

2.6.1 General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plan shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL exceedance, or violation of an AQL, DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

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

2.6.2 Exceeding of Alert Levels and Performance Levels

2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions

1. If an operational performance level set in Section 4.2, Table III has been exceeded the permittee shall:
 - a. Notify the Groundwater Protection Value Stream (see Section 2.7.5) within five (5) days of becoming aware of the exceedance.
 - b. Submit a written report to the Groundwater Protection Value Stream within 30 days after becoming aware of the exceedance. The report shall document all of the following:
 - (1) A description of the exceedance and the cause of the exceedance;
 - (2) The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;
 - (3) Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;
 - (4) Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
 - (5) Any malfunction or failure of pollution control devices or other equipment or process.
2. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.1.1 Exceedance of Alert Limit for flow to New River

Effluent will not be discharged to the New River under normal operation conditions, discharge is under emergency conditions. Currently no groundwater monitoring is required downgradient of the discharge to the New River. However, if the total flow in a calendar year exceeds 300 million gallons (mg) per year (10.0 mgd, yearly average flow, x 30 days), the facility shall request a significant permit amendment, within 30 days of such an exceedance to install a monitor well located at POC #3 below the discharge into the New River. The application for the amendment shall include the information in A.A.C. R18-9-A202(8) not previously submitted for discharges to the New River. Further, under this contingency, until the permit is amended to include groundwater monitoring, all discharges to the New River will be monitored daily for Nitrate, total Nitrogen and *E.coli* as per Section 4.2, Table IC, Contingency Monitoring.

2.6.2.2 Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Tables IA or IC, 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, Tables IA and IC, 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

Not applicable.

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 II 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 II as follows:

Specified Monitoring Frequency (Section 4.2, Table II)	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 Protection Value Stream, 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 Protection Value Stream.

4. Within 30 days after confirmation 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.
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 II 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 time of issuance.

2.6.2.3.4 Alert Level for Groundwater Level

1. If an alert level for groundwater level established in Section 4.2, Table II is not within the allowable range, the permittee shall submit a written report 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 an alert level for groundwater level established in Section 4.2, Table II is not within the allowable range for more than two (2) 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, Tables IA, IB or IC has been violated, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Protection Value Stream according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may

include control of the source of discharge, cleanup of affected soil, surface water or groundwater, notification of downstream or downgradient users who may be directly affected by the discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

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

2.6.4 Aquifer Quality Limit Violation

1. If an AQL set in Section 4.2, Table II has been exceeded, 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 the verification sample 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 as follows:

Specified Monitoring Frequency (Section 4.2, Tables II)	Monitoring Frequency for AQL Exceedance
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.

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.

2.6.5 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, Discharge Monitoring
 - Table II, Groundwater Monitoring - BD-PZ-1/BD-POC-1The parameters listed in the above-identified tables from Section 4.2 are the only parameters for which SMRF reporting is required.
4. Within the eSMRF comments fields, or in addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

2.7.2 Operation Inspection / Log Book Recordkeeping

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

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

2.7.3 Permit Violation and Alert Level Status Reporting

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

2.7.4 Operational, Other or Miscellaneous Reporting

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

2.7.5 Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted to:

Arizona Department of Environmental Quality
Groundwater Protection Value Stream
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4681

Or

Through the myDEQ portal accessible on the ADEQ website at:
<http://www.azdeq.gov/welcome-mydeq>

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

Arizona Department of Environmental Quality
Groundwater Protection Value Stream
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

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

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 the Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report “temporary cessation” in the comment section.

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

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

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection Value Stream of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report “closure in process” in the comment section.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Protection Value Stream, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

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

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Protection Value Stream indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

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

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

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Protection Value Stream.

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

2.10.1 Post-Closure Plan

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

2.10.2 Post-Closure Completion

Not required at the time of permit issuance.

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3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Not required at the time of permit issuance.

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4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable at permit issuance

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4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IA
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1 Effluent Quality	Point of discharge from the ultra violet disinfection channel			33° 33' 42" N	112° 13' 51" W
2 NAUSP Flows	Flow meter located on the line to the NAUSP			33° 31' 36" N	112° 18' 11" W
3 ASR-1 Well Flows	Flow meter located on the line to the ASR-1 Well			33° 33' 44" N	112° 13' 54" W
4 Reuse Flow	Flow meter located on the line for the reuse flow			33° 33' 42" N	112° 13' 51" W
5 AZPDES Flow ¹ (to the New River)	Flow meter located on the line for the AZPDES flow			33° 33' 42" N	112° 13' 51" W
Parameter	AL ²	DL ³	Units	Sampling Frequency	Reporting Frequency
Total Flow: Daily	Not Established ⁴	Not Established	mgd ⁵	Daily	Quarterly
Total Flow: Average Monthly ⁶	10.92	11.5	mgd	Daily (monthly average) ⁷	Quarterly
Total Flow: Yearly Average	9.5	10.0	mgd	Daily (yearly average) ⁸	Yearly
Recharge Flow (NAUSP): Daily	Not Established	Not Established	mgd	Daily	Quarterly
Recharge (NAUSP)Flow: Average Monthly	9.5	10.0	mgd	Monthly	Quarterly
ASR-1 Well: Daily	Not Established	Not Established	mgd	Daily	Quarterly
ASR-1 Well: Average Monthly	1.395	1.468	mgd	Monthly	Quarterly
Reuse Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Average Monthly	9.5	10.0	mgd	Monthly	Quarterly
AZPDES Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
AZPDES Flow: Average Monthly	Not Established	Not Established	mgd	Monthly	Quarterly

¹ Effluent will not be discharged to the New River under normal operation conditions, discharge is under emergency conditions only.

² AL = Alert Level

³ DL = Discharge Limit

⁴ Not Established = Monitoring required but no limits have been specified at time of permit issuance.

⁵ mgd = million gallons per day

⁶ Flow is calculated annually using average daily flows. The flow is the total flow to the recharge system.

⁷ Calculated number, using average of daily flows in a month.

⁸ Calculated number, using average of daily flows in a year.

Total AZPDES Flow ⁹	300	Not Established	mgd	Calendar Year	Yearly
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⁹ See Section 2.6.2.1.1 and Compliance Schedule 3.0 item 3.1 for contingency action concerning exceeding flow limit. If the total flow in a calendar year exceeds 300 mg per year (10.0 mgd, yearly average flow, x 30 days), the facility shall request a significant permit amendment, within 30 days of such an exceedance to install a monitor well located at POC #2 below the discharge into the New River. Until the permit is amended to include groundwater monitoring, all discharges to the New River will be monitored daily per Section 4.2, Table 1C.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING - Continued

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Point of discharge from the ultra violet disinfection channel		33° 33' 42" N		112° 13' 51" W
Parameter	AL ¹⁰	DL ¹¹	Units	Sampling Frequency	Reporting Frequency
<i>E.coli</i> : Single sample maximum	No Limit	15.0	MPN ¹²	Daily ¹³	Quarterly
<i>E.coli</i> : four (4) of seven (7) samples in a week ¹⁴	Non-detect	Non-detect ¹⁵	MPN	Weekly Calculation	Quarterly
Total Nitrogen ¹⁶ : Five-sample rolling geometric mean	8.0	10.0	mg/l	Monthly Calculation ¹⁷	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

¹⁰ AL = Alert Level

¹¹ DL = Discharge Limit

¹² MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.

¹³ For *E.coli* only, "daily" sampling means every day in which a sample can practicably be obtained and analyzed.

¹⁴ **Week** means a seven-day period starting on Sunday and ending on the following Saturday.

¹⁵ *E.coli* four (4) of the last seven (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.

¹⁶ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

¹⁷ A 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) ¹⁸	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

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

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS A+¹⁹

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
1	Point of discharge from the ultra violet disinfection channel		33° 33' 42" N	112° 13' 51" W
Parameter	AL ²⁰	Units	Sampling Frequency	Reporting Frequency
<i>E.coli</i> : Single sample maximum	Not Established	MPN	Daily	Quarterly
<i>E.coli</i> : four (4) of seven (7) samples in a week ²¹	Non-detect ²²	MPN	Daily Evaluation	Quarterly
Total Nitrogen ²³ : Five-sample rolling geometric mean ²⁴	10.0	mg/l	Monthly	Quarterly
Turbidity ²⁵ : Single reading	5.0	NTU ²⁶	Everyday ²⁷	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly
Enteric Virus: Four (4) of last seven (7) samples	Non-detect	PFU ²⁸	Monthly/Suspended ²⁹	Quarterly

¹⁹ Reclaimed water monitoring under Table IB shall be performed anytime effluent is discharged to the reuse site and is in addition to routine discharge monitoring required under Table 1A.

²⁰ AL = Alert Level

²¹ **Week** means a seven-day period starting on Sunday and ending on the following Saturday.

²² If at least four (4) of the last seven (7) samples 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 the last seven (7) samples have detections of *E.coli*, report “no” in the appropriate space on the SMRF (indicating that the standard has **not** been met).

²³ Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)

²⁴ The 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: $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

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.

²⁸ Plaque Forming Units per 40 Liters. A value of <1.1 PFU/40 L shall be considered to be non-detect.

²⁹ Enteric virus sampling shall resume only if two (2) consecutive turbidity limits are exceeded. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter “suspended” in the appropriate space on the SMRF.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IC
CONTINGENCY MONITORING - AZDPES³⁰

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
5	flow meter to the AZDPES				
Parameter	AL ³¹	DL ³²	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ³³ :	8.0	10.0	mg/l	Daily	Monthly
Nitrate	8.0	10.0	mg/l	Daily	Monthly
Nitrite	0.8	1.0	mg/l	Daily	Monthly
Total Kjeldahl Nitrogen (TKN)	Reserved	Reserved	mg/l	Daily	Monthly
<i>E. coli</i> : Single sample maximum	No Limit	15.0	MPN ³⁴	Daily	Monthly
<i>E. coli</i> : four (4) of seven (7) samples in a week ³⁵	Non-detect	Non-detect ³⁶	MPN	Daily Evaluation	Monthly

³⁰ Per Section 2.6.2.1.1, if the total flow in a calendar year exceeds 300 mg per year (10.0 mgd, yearly average flow, x 30 days), the facility shall request a significant permit amendment, within 30 days of such an exceedance to install a monitor well located at POC #2 below the discharge into the New River. Until the permit is amended to include groundwater monitoring, all discharges to the New River will be monitored daily per this Table.

³¹ AL = Alert Level

³² DL = Discharge Limit

³³ Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.

³⁴ MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.

³⁵ **Week** means a seven-day period starting on Sunday and ending on the following Saturday.

³⁶ *E. coli* four (4) of the last seven (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.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
6	BD-PZ-1: Approximately 75 feet Northwest of the ASR-1 Well			33° 33' 45"N	112° 13' 54"W
Parameter	AL ³⁷	AQL ³⁸	Units	Sampling Frequency	Reporting Frequency
Groundwater Level	50	NA	ftbgs ³⁹	Quarterly	Quarterly
Sampling Point Number	Sampling Point Identification			Latitude	Longitude
7	BD-POC-1: Approximately 210 feet downgradient of ASR- Well			33° 33' 44"N	112° 13' 57"W
Parameter	AL ⁴⁰	AQL ⁴¹	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ⁴² :	8.0	10.0	mg/l	Monthly Calculation	Quarterly
Nitrate-Nitrite as N	8.0	10.0	mg/l	Monthly Calculation	Quarterly
Nitrate as N	8.0	10.0	mg/l	Monthly	Quarterly
Nitrite as N	0.8	1.0	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Not Established ⁴³	Not Established	mg/l	Monthly	Quarterly
Total Coliform	Not Established	Absence ⁴⁴	MPN ⁴⁵	Monthly	Quarterly
Enteric Virus	Non-detect	Non-detect	PFU ⁴⁶	Quarterly	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

³⁷ AL = Alert Level

³⁸ AQL = Aquifer Quality Limit

³⁹ Below ground surface

⁴⁰ AL = Alert Level

⁴¹ AQL = Aquifer Quality Limit

⁴² Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.

⁴³ Not Established = Monitoring required, but no limits have been established.

⁴⁴ A positive result for total coliform may be verified with an analysis for *E. coli*. A positive result for *E. coli* shall be considered an exceedance of the AQL for total coliform.

⁴⁵ MPN = Most Probable Number per 100 ml. For MPN, a value of <2.2 shall be considered to be non-detect.

⁴⁶ PFU=Plaque Forming Units per 40 liters. A value of <1.1 PFU/40L shall be considered to be non-detect.

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

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4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING (continued)

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
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) ⁴⁷	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

⁴⁷Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE III
 FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK⁴⁸**

Pollution Control Structure/Parameter	Performance Level	Inspection Frequency
Pump Integrity	Good working condition	Weekly
Treatment Plant Components	Good working condition	Weekly
ASR wells	<ul style="list-style-type: none"> · Good working condition · No biofouling · No clogging · No daylighting 	Monthly

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⁴⁸ The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

5.0 REFERENCES AND PERTINENT INFORMATION

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

1. APP Application dated: April 23, 2018
2. Contingency Plan, dated: April 16, 2018
3. Final Engineering Memo dated: August 14, 2018
4. Final Hydrologist Memo dated: August 15, 2018
5. Public Notice date: TBD

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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).