

**STATE OF ARIZONA  
AQUIFER PROTECTION PERMIT NO. P-102392  
PLACE ID 1877, LTF 63061  
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 Bullhead City to operate the Section 10 Wastewater Treatment Plant located at 901 Richardo Avenue, Bullhead City, Arizona, in Mohave County, over groundwater of the Lake Mohave groundwater basin in Township 19 N, Range 22 W, Section 10, NE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, 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 Bullhead City – Section 10 Wastewater Treatment Plant  
**Facility Address:** 901 Richardo Avenue  
Bullhead City, Arizona, 86422  
**County:** Mohave

**Permitted Flow Rate:** 4,000,000 gallons per day (gpd)

**Permittee:** City of Bullhead City  
**Permittee Address:** 2355 Trane Road  
Bullhead City, Arizona, 86442

**Facility Contact:** Mike Hammontree, Utilities Superintendent  
**Emergency Phone No.:** (928) 763-7299

**Latitude/Longitude:** 35° 03' 04.32" N / 114° 36' 01.43" W  
**Legal Description:** Township 19N, Range 18W, Section 22, NW<sup>1</sup>/<sub>4</sub>, Gila and Salt River Baseline and Meridian

**1.2 AUTHORIZING SIGNATURE**

\_\_\_\_\_  
**Trevor Baggione, Director**  
Water Quality Division  
Arizona Department of Environmental Quality

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2017

**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 the City of Bullhead City Section 10 Wastewater Treatment Plant (WWTP) with a maximum monthly average flow of 4.0 million gallons per day (mgd). The WWTP process consists of an influent pump station, headworks (includes two fine screens, and odor removal), one oxidation ditch with anoxic basins and bio-selectors, one aeration basin, two secondary clarifiers, a chemical polymer feed system, two tertiary sand filtration units and one tertiary disk filtration unit, two ultraviolet (UV) disinfection units, a back-up chlorination system, two aerobic sludge digesters, a belt filter press, two sludge drying beds, a lined holding pond, an effluent pump station, a reuse pump station, four new reclaimed water storage tanks and a new injection well pump station.

The effluent shall be stored in a lined storage pond and then disposed by reuse (as regulated under a valid reclaimed water permit) or recharged through five rapid infiltration basins (RIBs) or through two new injection wells. The WWTP is classified as producing Class A+ reclaimed water as specified in A.A.C. R18-11-303. Chemical feed facilities shall be available to add coagulants or polymers as needed to ensure the reclaimed water will meet the permit turbidity requirements for Class A+ reclaimed water.

Sludge generated at the WWTP shall be digested in the aerobic digester, dewatered in the belt filter press, and transported to a landfill for disposal. The sludge drying beds shall be retained as standby units.

Depth-to-groundwater at the site is approximately 18 feet below ground surface. The direction of groundwater flow is to the southwest. The facility is within the 100-year flood plain, but is protected by a flood-protection berm around the entire plant site.

ADEQ has reviewed and approved the following change under this amendment:

- Addition of two injection wells for effluent disposal
- Addition of four effluent storage tanks and a new injection well pump station

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:

<b>Facility</b>	<b>Latitude</b>	<b>Longitude</b>
City of Bullhead City Section 10 WWTP	35° 03' 4.32" N	114° 36' 1.43" W
RIB #1	35° 03' 2.56" N	114° 36' 7.78" W
RIB #2	35° 03' 7.62" N	114° 36' 7.97" W
RIB #3	35° 03' 10.00" N	114° 36' 4.99" W
RIB #4	35° 03' 11.76" N	114° 36' 5.43" W
RIB #5	35° 03' 10.29" N	114° 36' 7.45" W
Sludge Drying Bed #1	35° 03' 7.68" N	114° 36' 5.73" W
Sludge Drying Bed #2	35° 03' 7.68" N	114° 36' 5.73" W
Effluent Holding Pond	35° 03' 11.00" N	114° 36' 1.00" W
Injection Well #1	35° 03' 12.75" N	114° 36' 5.91" N
Injection Well #2	35° 03' 12.9" N	114° 35' 59.6" N

### **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 4,000,000 gallons per day (gpd). If the facility is not constructed or is incapable of discharge, the permittee may be eligible for reduced fees under the rule. Send all correspondence requesting reduced fees to the Groundwater Section. Please reference the permit number, LTF number, and the reason for requesting reduced fees under the rule.

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is \$643,512. 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 WWTP shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. All treatment units upstream of the filters will be covered with concrete or aluminum covers and installed with air scrubbers provided for odor control. All pumps, blowers, and electrical equipment shall be housed within buildings for noise control.

The facility shall meet the requirements for pretreatment by conducting monitoring as per A.A.C. R18-9-B204(B)(6)(b)(iii). 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 WWTP was designed as per design reports prepared and stamped, dated, signed, and sealed by David Prinzhorn, P.E., Sonoran Water Resources, LLC dated November 1, 2005, and subsequent sealed submittals that served as additions to the design report. The design meets the 350-foot setback requirement for the full build-out WWTP design capacity of 4.0 mgd.

The design report for headworks facility was prepared and stamped, dated, and signed (sealed) by Jason Mercer, P.E., Morrison Maierle, Inc. dated November 2009. Subsequent sealed submittals served as additions to the design report.

The effluent pump station and pipelines for injection wells were designed as per the design report prepared and stamped, and signed (sealed) by Robert Leuck, P.E., City of Bullhead City dated October 27, 2016 and subsequent sealed submittals that served as additions to the design report. The injection wells are designed as per design report signed and sealed by Gary G Small, R.G., HydroSystems, Inc., dated May 3, 2016.

#### **2.2.2 Site-specific Characteristics**

Site specific characteristics were not used to determine BADCT.

#### **2.2.3 Pre-operational Requirements**

Prior to initiating use of the new injection well pump station, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per the compliance schedule in Section 3.0. The certificate shall be submitted to the Groundwater Section.

Prior to initiating the discharge through the injection well #1 and #2, the permittee shall submit well installation report per Section 3.0, Compliance Schedule Item #3 and #4.

**2.2.4 Operational Requirements**

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

**2.2.5 Reclaimed Water Classification**

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

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

**2.2.6 Certified Areawide Water Quality Management Plan Conformance**

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

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

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

1. The permittee is authorized to operate the treatment facility with a maximum average annual flow of 4.0 mgd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the treatment facility 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, 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 #	ADWR Registration #	POC Location	Latitude	Longitude
POC #1 (Replacement Well)	TBD	MW-1 is located down-gradient of the RIBs near the center of the facility	35° 03' 8.65" N	114° 36' 4.37" W
POC #2 (Irrigation Well)	55-559858	MW-2 is located downgradient of the two Injection Wells	35° 03' 5.70" N	114° 36' 5.64" W
POC #3 (conceptual)	Not applicable	Located at the southwest corner of the WWTP (no well)	35° 03' 1.5" N	114° 36' 8.9" W

The previous permit with LTF #51240 included two POC wells, POC #1 (MW-1) and POC #2. Monitor well POC #1 (MW-1) was damaged and will be replaced. Under this amendment, one conceptual POC location (POC #3) and two monitor wells (POC #1 and POC #2) have been approved as point of compliance.

The POC #1 shall be monitored for the discharge from the five RIBs. POC #2 shall be monitored for the discharge from the two injection wells. POC #3 is a conceptual POC location and is designated at the southwest corner of the WWTP, a monitor well is not required at this location. Groundwater monitoring is required at POC #1 and POC #2 under this permit per Section 4.2, Table IIA and Table IIB.

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 applicable

### **2.5.2 Routine Discharge Monitoring**

The permittee shall monitor the effluent according to the Routine Discharge Monitoring Table in Section 4.2, Table IA. Representative samples of the effluent shall be collected at the point of discharge from the effluent pump station.

### **2.5.3 Reclaimed Water Monitoring**

The permittee shall monitor the reclaimed water according to the Class A+ Reclaimed Water Monitoring Table in Section 4.2, Table IB in addition to the routine discharge monitoring parameters listed in Table IA. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent pump station.

### **2.5.4 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.

#### **2.5.4.1 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(3), or any other event, a replacement POC well shall be constructed and installed upon approval by

ADEQ. If the replacement well is fifty feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well.

### **2.5.5 Surface Water Monitoring and Sampling Protocols**

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

### **2.5.6 Facility / Operational Monitoring**

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

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

### **2.5.7 Analytical Methodology**

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. 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 17<sup>th</sup> 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 Section for approval prior to installation and the permit shall be amended to include any new monitoring points.

## **2.6 Contingency Plan Requirements**

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

### **2.6.1 General Contingency Plan Requirements**

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

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

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL or DL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where

verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

## **2.6.2 Exceeding of Alert Levels and Performance Levels**

### **2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions**

1. For freeboard operational performance levels, the permittee shall comply with the requirements as specified in Section 4.2, Table III (Facility Inspections) to prevent the overtopping of rapid infiltration basins and effluent holding pond. If an impoundment is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.
2. If an operational performance level set in Section 4.2, Table III has been exceeded the permittee shall:
  - a. Notify the Groundwater Section within five (5) days of becoming aware of the exceedance.
  - b. Submit a written report to the Groundwater Section 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.
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 IA 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 Section 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 IA has been exceeded, the permittee shall submit an application to the Groundwater Section for a permit amendment to expand the treatment facility, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for amendment requires ADEQ approval.

**2.6.2.2.2 Exceeding Injection Well Flow Limit**

If the AL for average daily flow for injection well in Section 4.2, Table IA has been exceeded, the permittee shall divert the effluent to rapid infiltration basins. The permittee may submit an application to the Groundwater Section for a permit amendment to add more injection wells.

**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 IIA and IIB, the permittee may conduct verification sampling within five (5) days of becoming aware of the exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling confirms the AL exceedance or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring for the pollutants set in Section 4.2, Table II as follows:

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

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



3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Section, that although an AL has been exceeded, pollutants are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Section.
4. Within 30 days after confirmation of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Section along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
6. The increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 4.2, Table 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 monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2, Tables IIA and IIB, the permittee shall submit a written report to the Groundwater Section 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, Tables IIA and IIB 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 2.5.4.1. 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 or IB has been violated, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
  - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
  - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
  - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Section 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 IIA and IIB 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 IIA and IIB)	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 Section 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 Section 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 Section within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. 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 Section 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 Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

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

### **2.7.1 Self-Monitoring Report Form**

1. The permittee shall complete the Self-Monitoring Report Form (SMRF) provided by ADEQ, and submit the completed report to the Groundwater Section. The permittee shall use the format devised by ADEQ.
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 Section.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
  - Table IA, Discharge Monitoring
  - Table IB, Reclaimed Water Monitoring
  - Table IIA, Groundwater Quality Monitoring for POC #1
  - Table IIB, Groundwater Quality Monitoring for POC #2

The parameters listed in the above-identified tables from Section 4.0 are the only parameters for which SMRF reporting is required.

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

### **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.

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 Section in writing (by mail or by fax - 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.
2. The permittee shall submit a written report to the Groundwater Section 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 Section any violations or exceedances as per Section 2.7.3.

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

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

#### **2.7.4.1 Well Installation Report**

A well installation report shall be submitted to ADEQ within ninety (90) days after the completion of replacement well installations in accordance with Sections 2.4, 2.5.4.1 and/or the Compliance Schedule # 2 in Section 3.0. Each well installation report shall be completed in accordance with A.A.C. R12-15-801 et seq. and consist of the following

- Copies of Arizona Department of Water Resources (ADWR) Notice of Intent and all related submittals to ADWR;
- ADWR registration number assigned to the new well
- Boring log and well as-built diagram;
- Total depth of well measured after installation;
- Top of well casing or sounding tube (whichever is used as the fixed reference measuring point) and ground surface elevation;
- Depth to groundwater;
- Geophysical logging reports and subsurface sampling results, if any;
- Description of well drilling method;
- Description of well development method;
- If dedicated sampling equipment installed, details on the equipment and at what depth the equipment was installed;

- Summary of analytical results for initial groundwater sample collected after installation;
- Corresponding analytical data sheets; and
- GPS coordinates for each new well;

#### **2.7.4.2 Injection Well Installation Report(s)**

An injection well installation report shall be submitted to ADEQ within ninety (90) days after the installation and completion of Injection Well #1 and/or Injection Well #2 per the Compliance Schedule #3 and #4 in Section 3.0. Each well installation report shall be completed in accordance with A.A.C. R12-15-801 et seq. and consist of the following:

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

#### **2.7.4.3 Well Abandonment Report**

If monitor wells associated with this permit are abandoned due to poor performance, casing collapse, or other reasons, then within 90 days of completing abandonment, the permittee shall submit a well abandonment report to ADEQ. Each well abandonment report shall be completed in accordance with A.A.C. R12-15-801 et seq. and consist of the following:

- Copy of ADWR Notice of Intent to Abandon;
- Copy of ADWR Abandonment Report;
- A description of the methods used to seal the well casing and the perforated or screened interval of the well; and,
- GPS coordinates of the former well location.

#### **2.7.5 Reporting Location**

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

Arizona Department of Environmental Quality  
Groundwater Section  
Mail Code 5415B-3  
1110 West Washington Street  
Phoenix, Arizona 85007  
Phone (602) 771-4571

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 Section shall be directed to:

Arizona Department of Environmental Quality  
Groundwater Section  
Mail Code 5415B-3  
1110 West Washington Street  
Phoenix, Arizona 85007  
Phone (602) 771-4449

### 2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

<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:

<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 Section 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 Section 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 Section 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 Section of the operational status of the facility every

three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

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

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Section 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 Section, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

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

### **2.9.2 Closure Completion**

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Section indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. 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 Section.

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

### **2.10.1 Post-Closure Plan**

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

### **2.10.2 Post-Closure Completion**

Not required at the time of permit issuance.



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

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

No.	Description	Due by:	Permit Amendment Required?
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 injection well pump station is constructed according to the Department-approved design report or plans and specifications, as applicable.	Prior to utilizing the new injection well pump station and within 90 days of completion of construction.	No
2	The permittee shall submit a well installation report for replacement well POC #1 per Section 2.7.4.1.	Within 90 days of installation of monitor well	No
3	The permittee shall submit installation report for Injection Well #1 per Section 2.7.4.2.	Within 90 days of installation of each well	No
4	The permittee shall submit installation report for Injection Well #2 per Section 2.7.4.2.	Within 90 days of installation of each well	No
5	The permittee shall submit an ADWR abandonment report if any monitor well associated with this permit is abandoned due to poor performance, casing collapse, or other reasons per Section 2.7.4.3.	Within 90 days of completing abandonment	No

**4.0 TABLES OF MONITORING REQUIREMENTS**

**4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)**

Not applicable.

**4.2 COMPLIANCE (or OPERATIONAL) MONITORING**

**TABLE IA  
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude	
1 – Total Flow	Flow meter for total flow located at the influent pump station		35° 03' 4.27" N	114° 36' 1.23" W	
2 – Reuse Flow	Flow meter located at reuse pump station reuse flow		35° 03' 7.48" N	114° 35' 59.75" W	
3 – Injection Well #1 Flow	Flow meter for recharge flow through injection well #1		35° 03' 12.75" N	114° 36' 5.91" W	
4 – Injection Well #2 Flow	Flow meter for recharge flow through injection well #2		35° 03' 12.99" N	114° 35' 59.65" W	
Parameter	AL <sup>1</sup>	DL <sup>2</sup>	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: Monthly Average <sup>7</sup>	3.8	4.0	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Monthly Average	3.8	4.0	mgd	Monthly Calculation	Quarterly
Recharge Flow to RIB: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Recharge Flow RIB: Monthly Average	3.8	4.0	mgd	Monthly Calculation	Quarterly
Recharge Flow to Injection Well #1: Daily	Not Established	800	gpm <sup>8</sup>	Daily Average	Quarterly
Recharge Flow to Injection Well #1: Monthly Average	Monitor	Monitor	gpm	Monthly Calculation	Quarterly
Recharge Flow to Injection Well #2: Daily	Not Established	800	gpm	Daily Average	Quarterly
Recharge Flow to Injection Well #2: Monthly Average	Monitor	Monitor	gpm	Monthly Calculation	Quarterly

<sup>1</sup> AL = Alert Level

<sup>2</sup> DL = Discharge Limit

<sup>3</sup> Total flow for all methods of disposal (reuse, recharge through RIB and injection wells)

<sup>4</sup> Flow shall be measured using a continuous recording flow meter which totals the flow daily.

<sup>5</sup> Not Established means monitoring is required but no limits are specified.

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

<sup>7</sup> Monthly = Calculated value; average of daily flow values in a month.

<sup>8</sup> gpm= gallons per minute

**TABLE IA  
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
5	Effluent/Reuse Pump Station		35° 03' 8.37" N		114° 35' 59.45" W
Parameter	AL <sup>9</sup>	DL <sup>10</sup>	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single sample maximum	Not Established	23	CFU <sup>11</sup>	Daily <sup>12</sup>	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week <sup>13</sup>	Not Established	Non-detect <sup>14</sup>	CFU	Weekly Evaluation	Quarterly
Total Nitrogen : Five-sample rolling geometric mean	8.0	10.0	mg/l	Monthly Calculation	Quarterly
<b>Metals (total):</b>					
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>9</sup>AL = Alert Level

<sup>10</sup>DL = Discharge Limit

<sup>11</sup>CFU = Colony Forming Units/100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect.

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

<sup>14</sup>Fecal coliform 4 of 7 samples requires entering “Compliance” or “Non-compliance” on the SMRF for each week of the reporting period. Evaluate the daily fecal coliform results for that week (Sunday through Saturday). If, of these seven days, four or more of the daily fecal coliform results are non-detect, report “Compliance” for that week’s entry on the SMRF. If three or fewer of the daily fecal coliform results are non-detect, report “Non-compliance for that week’s entry on the SMRF.

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

Parameter	AL	DL	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>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 IB**  
**RECLAIMED WATER MONITORING TABLE - CLASS A+<sup>16</sup>**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
5	Effluent/Reuse Pump Station		35° 03' 8.37" N	114° 35' 59.45" W
Parameter	DL <sup>17</sup>	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single-sample maximum	23.0	CFU <sup>18</sup>	Daily <sup>19</sup>	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	Non-detect <sup>20</sup>	CFU	Daily Evaluation	Quarterly
Total Nitrogen <sup>21</sup> : Five-sample rolling geometric mean <sup>22</sup>	10.0	mg/l <sup>23</sup>	Monthly Calculation	Quarterly
Turbidity <sup>24</sup> : Single reading	5.0	NTU <sup>25</sup>	Daily <sup>26</sup>	Quarterly
Turbidity: 24-hour average	2.0	NTU	Daily Calculation	Quarterly

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

<sup>17</sup>DL = discharge limit

<sup>18</sup>CFU = Colony Forming Units per 100 ml: For CFU, a value of <1.0 shall be considered to be non-detect.

<sup>19</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>20</sup>Requires entering “Compliance” or “Non-compliance” on the SMRF for each day of the reporting period. Evaluate the daily fecal coliform result along with the six (6) previous sample results. If four (4) or more of those results are non-detect, report “Compliance” for that day’s entry on the SMRF. If four (4) or more of those results have detections of fecal coliform, report “Non-compliance” for that day’s entry.

<sup>21</sup>Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)

<sup>22</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>23</sup>mg/l = milligrams per liter

<sup>24</sup>Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF; occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance.

<sup>25</sup>NTU = Nephelometric Turbidity Units

<sup>26</sup>For the single turbidity reading, daily means the maximum reading during the 24-hour period.

**TABLE IIA – POC #1  
GROUNDWATER MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
6	MW-1 is located down-gradient of the RIBs near the center of the facility			35° 03' 08.65" N	114° 36' 04.37" W
Parameter	AL <sup>27</sup>	AQL <sup>28</sup>	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen <sup>29</sup> :	8.0	10.0	mg/l <sup>30</sup>	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 <sup>31</sup>	Not Established	mg/l	Monthly	Quarterly
Total Coliform	Absence	Absence	P/A <sup>32</sup>	Monthly	Quarterly
Water Level <sup>33</sup>	10-30	Not Established	Feet bgs <sup>34</sup>	Monthly	Quarterly
<b>Metals (total):</b>					
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>27</sup>AL = Alert Level

<sup>28</sup>AQL = Aquifer Quality Limit

<sup>29</sup>The calculation for Total Nitrogen is Nitrate as N plus Nitrite as N plus TKN.

<sup>30</sup>mg/l = milligrams per liter

<sup>31</sup>Not Established means monitoring is required, but no limits are specified.

<sup>32</sup>P/A = Presence or absence of total coliforms in a 100-milliliter sample. If total coliforms are present, enter “Non-compliance on the SMRF. If total coliforms are absent, enter “Compliance” on the SMRF.

<sup>33</sup>See Section 2.6.2.3.4.

<sup>34</sup>bgs = below ground surface

**TABLE IIA – POC #1**  
**GROUNDWATER MONITORING (continued)**

<b>Parameter</b>	<b>AL</b>	<b>AQ</b>	<b>Units</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
<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>35</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>35</sup>Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

**TABLE IIB – POC #2  
GROUNDWATER MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
7	MW-2 - Located downgradient of the two Injection Wells (ADWR Registration #55-559858)			35° 03' 5.70" N	114° 36' 5.64" W
Parameter	AL <sup>36</sup>	AQL <sup>37</sup>	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen <sup>38</sup> :	8.0	10.0	mg/l <sup>39</sup>	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 <sup>40</sup>	Not Established	mg/l	Monthly	Quarterly
Total Coliform	Absence	Absence	P/A <sup>41</sup>	Monthly	Quarterly
Water Level <sup>42</sup>	>75	Not Established	Feet bgs <sup>43</sup>	Monthly	Quarterly
<b>Metals (total):</b>					
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>36</sup>AL = Alert Level

<sup>37</sup>AQL = Aquifer Quality Limit

<sup>38</sup>The calculation for Total Nitrogen is Nitrate as N plus Nitrite as N plus TKN.

<sup>39</sup>mg/l = milligrams per liter

<sup>40</sup>Not Established means monitoring is required, but no limits are specified.

<sup>41</sup>P/A = Presence or absence of total coliforms in a 100-milliliter sample. If total coliforms are present, enter “Non-compliance on the SMRF. If total coliforms are absent, enter “Compliance” on the SMRF.

<sup>42</sup>See Section 2.6.2.3.4.

<sup>43</sup>bgs = below ground surface



**TABLE IIB – POC #2**  
**GROUNDWATER MONITORING (continued)**

Parameter	AL	AQ	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>44</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>44</sup>Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

**TABLE III**  
**FACILITY INSPECTION (OPERATIONAL MONITORING)<sup>45</sup>**

<b>Pollution Control Structure/Parameter</b>	<b>Performance Level</b>	<b>Inspection Frequency</b>	<b>Reporting Frequency</b>
Pump Integrity	Good working condition	Weekly	See Section 2.7.3
Treatment Plant Components	Good working condition	Weekly	See Section 2.7.3
Effluent Holding Pond Berm Integrity	No visible structural damage, breach, or erosion of embankments	Weekly	See Section 2.7.3
Sludge Drying Bed Liner Integrity	No cracks or leaks that would exceed a leakage rate of 550 gpd/acre	Weekly	See Section 2.7.3
Sludge Drying Bed Freeboard	One (1) Linear Foot	Weekly	See Section 2.7.3
Effluent Holding Basin Freeboard	Three (3) Linear Foot	Weekly	See Section 2.7.3
Rapid Infiltration Basins Freeboard	One (1) Linear Foot	Weekly	See Section 2.7.3
Injection Well Integrity	Good working condition	Weekly	See Section 2.7.3

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<sup>45</sup>The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

## **5.0 REFERENCES AND PERTINENT INFORMATION**

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

1. APP Application, dated: May 3, 2016
2. Contingency Plan, dated: September 5, 2003
3. Final Hydrologist Report, dated: December 22, 2016
4. Final Engineering Report, dated: December 13, 2016
5. Public Notice, dated: XXXXX

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

**7.0 ADDITIONAL PERMIT CONDITIONS**

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

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

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

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

**7.3 Permit Transfer**

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