

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-102475
PLACE ID 1914, LTF 43461
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 City of Bullhead City is hereby authorized to operate the Bullhead City Section 18 Wastewater Treatment Plant, located at 1601 Bullhead Parkway in Bullhead City, Mohave County, Arizona, over the Lake Mohave Valley basin in Township 20 N, Range 21 W, Section 18, Gila and Salt River Base Line 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: Bullhead City Section 18 Wastewater Treatment Plant (WWTP)

Facility Address: 1601 Bullhead Parkway
Bullhead City, Arizona 86442

County: Mohave

Permittee: City of Bullhead City
Permittee Address: 1255 Marina Boulevard
Bullhead City, Arizona 86442

Facility Contact: Pawan Agrawal, City Engineer
Emergency Phone No.: (928) 763-0128 Ext: 500

Latitude/Longitude: 35° 07' 26" N/ 114° 33' 14" W

Legal Description: Township 20N, Range 21W, Section 18, Gila and Salt River Baseline and Meridian

1.2 AUTHORIZING SIGNATURE

Joan Card, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this _____, day of _____, 2009

THIS AMENDED PERMIT SUPERCEDES ALL PREVIOUS PERMITS

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

The City of Bullhead City is authorized to operate the Section 18 Wastewater Treatment Plant (WWTP) designed to treat two million gallon per day (mgd) for treatment of municipal sewage. The tertiary treatment process includes odor controlled headworks with bar screens, flow equalization basin, anoxic and aeration tanks followed by membrane filtration, chlorination, and de-chlorination. The effluent is disinfected through an existing chlorination unit. From the effluent pump station, the treated effluent is disposed by reuse under a valid reclaimed water permit and excess effluent will be delivered to eight infiltration basins which were constructed on site. The effluent will also be used for various on-site plant operations and fire protection.

All sludge including screenings, grit, and scum will be dewatered onsite before being hauled off-site for disposal in accordance with state and federal regulations. The existing sludge drying beds will be used as a backup to the belt filter press.

Groundwater in the regional aquifer is reportedly present at depths ranging between 350 to 800 feet bgs. Depth to groundwater at an on-site well is approximately 350 feet bgs and the direction of groundwater flow is believed to be towards the west-southwest. The WWTP was designed and constructed according to plans approved by the ADEQ, APP & Reuse Unit on March 6, 2009.

The WWTP is rated as producing Class A+ reclaimed water standards (A.A.C. R18-11, Article 3) and may be delivered for beneficial use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

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:

Facility	Latitude	Longitude
WWTP	35° 07' 26" N	114° 33' 14" W
Infiltration Basins	35° 07' 29.02" N	114° 33' 3.15" W

Annual Registration Fee [A.R.S. § 49-242]

The Annual Registration Fee for this permit is established by A.R.S. § 49-242(E) and is payable to the Arizona Department of Environmental Quality (ADEQ) each year. The design flow is 2.0 million gallons per day.

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability is \$820,000 for closure and \$5,000 (annual) for post-closure costs. The financial capability was demonstrated through R18-9-A203 (B) (1).

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The Wastewater Treatment Plant shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204.

The facility shall meet the requirements for pretreatment by conducting monitoring as per R18-9-B204(B)(6)(b)(iii):

2.2.1 Engineering Design

The WWTP was designed as per the design plans prepared by A-N West Inc. Consulting Engineers, dated June 1991. This amendment includes a design report prepared, stamped, dated, and signed (sealed) by J. Douglas Kobrick, P.E., Camp Dresser & McKee, Inc., dated February 28, 2007. All subsequent submittals that served as supplements to the design report were also stamped, sealed and signed by J. Douglas Kobrick, Camp Dresser & McKee, Inc.

2.2.2 Site-specific Characteristics

Site specific characteristics were not used to determine BADCT.

2.2.3 Pre-operational Requirements

Not applicable

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the new Operation and Maintenance (O & M) Manual at the WRP site at all times and 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 material(s) used shall be documented on the Self-Monitoring Report Form (SMRF) submitted quarterly to the ADEQ Water Quality Compliance Section, Data Unit (see Section 2.7.5).

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).

2.3 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 WWTP with a maximum total average monthly flow of 2.0 mgd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRP 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 pollutant control technologies including liner failure¹, uncontrollable leakage, overtopping (e.g., exceeding the maximum storage capacity, defined as a fluid level exceeding the crest elevation of a permitted impoundment), of basins, lagoons, impoundments or sludge drying beds, berm breaches, accidental spills, or other unauthorized discharges.
4. Specific discharge limitations are listed in Section 4.2, Tables IA, IB, IC, and ID.

¹Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre.

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

The Points of Compliance (POCs) are designated at the following locations:

POC #	POC Location	Latitude	Longitude
1	Southwest edge of the facility	35°07'29" N	114°32'59.1" W
2	Downgradient (west) of the infiltration basins, and is approximately 300 feet from the boundary of Pollutant Management Area (PMA), ADWR Well # 55-909558	35°07'27.6" N	114°33'9.536" W

POC # 1 is a conceptual location. It is the initial POC in the APP and a well is not to be installed at this location for monitoring purpose. POC # 2, ADWR Well # 55-909558 is the new proposed POC location. A well needs to be installed and to be sampled for both ambient and routine groundwater monitoring.

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)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. 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. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) PART 136 for guidance in this regard. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Pre-Operational Monitoring

Not Applicable

2.5.2 Discharge Monitoring

The permittee shall monitor the wastewater according to Section 4.2, Table IA, IB, and IC. Table IA will monitor the flow from sampling points #1 and #2. Table IB requires monitoring for fecal coliform, total nitrogen, metals, VOCs, and indicator parameters at sampling point #3 which is located downstream of chlorine contact basin. Table IC requires monitoring for trihalomethanes from sampling points #4 and #5.

2.5.3 Reclaimed Water Monitoring

The permittee shall monitor the Class A+ reclaimed water parameters listed under Table 1D in addition to the routine discharge monitoring parameters listed in Tables 1A, IB, and IC. Representative samples of the reclaimed water shall be collected downstream of the chlorine contact basin (sampling point #3).

2.5.4 Groundwater Monitoring and Sampling Protocols

The permittee shall monitor the groundwater according to Section 4.2, Table IIA and IIB.

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 submit a written request to the Groundwater Section (GWS) to reduce the monitoring parameters in the Routine Groundwater Monitoring Table (Table IIB) in accordance with the following criteria:

1. The parameter in question has not been detected for at least four (4) consecutive quarterly monitoring events in the POC well. The PQL reported by the laboratory shall be less than 80% of the established numeric AWQS, and shall not be greater than three (3) times the laboratory method detection limit for that parameter.
2. The permittee shall submit a written report indicating the parameter(s) proposed for modification, accompanied by supporting data, including laboratory analytical reports and quality assurance/quality control data, to the ADEQ GWS for review.
3. Upon review, the GWS will determine if the modification(s) requested is justified and approved. The respective changes, if approved, shall require an amendment to the permit.

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, insufficient water in the well(s) for more than two (2) sampling events, 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 alert levels (ALs) and aquifer quality limits (AQLs) established for the previously designated POC well shall apply to the replacement well.

2.5.4.2 Ambient Groundwater Quality Monitoring for POC Well

Eight consecutive groundwater samples must be completed to establish existing ambient groundwater quality conditions for evaluating any short term or long term changes in water quality. Each ambient groundwater sample, as applicable, shall be analyzed for the parameters listed in Table IIA.

2.5.4.3 Alert Levels for POC Well

Alert levels shall be calculated for all contaminants with established AWQS for each POC well. The AL and Aquifer Quantity Limit (AQL) for each parameter for which the ambient sampling has been completed, are listed in Section 4, Table IIA. For those parameters for which the required ambient samples have not been completed, within ninety (90) days of receipt of the laboratory analyses for the final month of the ambient groundwater monitoring period for the POC well referenced in Section 2.4, the permittee shall submit the ambient groundwater monitoring data in tabulated form to the ADEQ APP Program for review. Copies of all laboratory analytical reports, field notes, the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analysis of the samples, and a report including the statistical calculation of the Alert Levels (ALs)

and Aquifer Quality Limits (AQLs) for all parameters listed in Section 4, Table IIA, to be established for the POC well, shall be included. The permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by ADEQ, or the permittee may defer calculation of the ALs and AQLs by the Groundwater Section (GWS). The ALs shall be established and calculated by the following formula, or another valid statistical method submitted to the GWS in writing and approved for this permit by the GWS.

$$AL = \bar{0} + K\Phi$$

Where $\bar{0}$ = mean, Φ = standard deviation, and K = one-sided normal tolerance interval with a 95% confidence level (Lieberman, G.J. (1958) Tables for One-sided Statistical Tolerance Limits: Industrial Quality Control, Vol XIV, No. 10). Obvious outliers should be excluded from the data used in the AL calculation.

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

1. The AL will be calculated for a parameter using the analyses from a minimum of eight (8) consecutive sample rounds.
2. Any data where the PQL exceeds 80% of the AWQS shall not be included in the AL calculation.
3. If a parameter is below the detection limit, the permittee must report the value as “less than” the numeric value for the PQL or detection limit for the parameter, not just as “non-detect”. For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
4. If the analytical results from more than 50% of the samples for a specific parameter are non-detect, then the AL shall be set at 80% of the AWQS.
5. If the calculated AL for a specific constituent and well is less than 80% of the AWQS, the AL shall be set at 80% of the AWQS for that constituent in that well.

2.5.4.4 Aquifer Quality Limits for POC Well

AQLs will be established in the permit for all parameters listed in Section 4.2, Table IIA for which an AWQS has been adopted. For each of the monitored analytes for which a numeric AWQS has been adopted, the AQL shall be established as follows:

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

2.5.5 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.

1. 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 on the SMRF submitted quarterly to the ADEQ Water Quality Compliance Section, Data Unit. If none of the conditions occur, the report shall say “no event” for a particular reporting period. If the facility is not in operation, the permittee shall indicate this on the SMRF.

2. The permittee shall submit data required in Section 4.2, Table III regardless of the operating status of the facility unless otherwise approved by the Department or allowed in 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 Arizona state certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Ave.
Phoenix, AZ 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 ADEQ 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 the approved contingency and emergency response plan(s) 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, discharge limit (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 has 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/Performance Levels

2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions

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

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

1. If an AL set in Section 4.2, Table IA, IB, and IC 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 ADEQ Water Quality Compliance 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

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

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

No ALs were 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 II, the permittee may conduct verification sampling within five 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 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 Water Quality Compliance 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 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 (6) 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.

2.6.3 Discharge Limit Violation

1. If a DL set in Section 4.2, Tables IA, IB, IC, and ID 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, if necessary to identify the cause of the violation.

The permittee shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer.

Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

2. The permittee shall comply with the freeboard requirements as specified in Section 4.2, Table III (Facility Inspections) to prevent the overtopping of an impoundment or sludge drying bed. If an impoundment or sludge drying bed is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.
3. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4 Aquifer Quality Limit Violation

1. If an AQL set in Section 4.2, Table IIB has been exceeded, the permittee may conduct verification sampling within five 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 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, Table 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.

3. 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 ADEQ Northern Regional Office at (928) 779-0313, and the ADEQ Water Quality Compliance Section at (602) 771-4497 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 ADEQ Northern Regional Office at (928) 779-0313, and the ADEQ Water Quality Compliance Section at (602) 771-4497, within 24 hours of discovering the discharge of non-hazardous material which: a) has the potential to cause an AQL exceedance; or b) 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 ADEQ Northern Regional Office, 1801 W. Route 66, Suite 117, Flagstaff, AZ 86004 and the ADEQ Water Quality Compliance 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 an AL exceedance, 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; and/or
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 ADEQ Water Quality Compliance Section (see Section 2.7.5), 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 SMRF provided by ADEQ. The completed SMRF shall be submitted to the Water Quality Compliance Section, Data Unit.
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 quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Section 4.0 list the parameters to be monitored and the frequency for reporting results for compliance monitoring. Monitoring and analytical methods shall be recorded on the SMRF. The permittee reserves the right to request a relaxation of the monitoring frequency for metals and volatile organic compounds through a permit amendment if the data indicate that water quality standards are being achieved consistently.
4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for an AL exceedance, 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 R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Water Quality Compliance Section (see Section 2.7.5) in writing within five days (except as provided in Section 2.6.5) of becoming aware of an AL exceedance, or violation of any permit condition, AQL, or DL.

2. The permittee shall submit a written report to the Water Quality Compliance 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 complete the SMRF provided by the Department to reflect facility inspection requirements designated in Section 4.2, Table III and submit to the ADEQ Water Quality Compliance Section, Data Unit (see Section 2.7.5) quarterly along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

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.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Data Unit
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to both of the following addresses:

Arizona Department of Environmental Quality
Water Quality Compliance Section
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4497
Fax (602) 771-4505

-AND-

Arizona Department of Environmental Quality
Northern Regional Office
1801 West Route 66, Suite 117
Flagstaff, Arizona 86001
Phone (928) 779-0313
Fax (928) 773-2700

All 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) 771-4428

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 Section and Water Quality Compliance Section shall be notified (see Section 2.7.5) 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 Water Quality Compliance Section and the Northern Regional Office 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 ADEQ with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.

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 Water Quality Compliance Section and the Northern Regional Office 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 Water Quality Compliance Section and the Northern Regional Office of the intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, 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. Remedial 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]

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Section. A copy of the cover letter must also be submitted to the ADEQ Water Quality Compliance Section.

Description	Due by:
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 facility is constructed according to the Department-approved design report or plans and specifications, as applicable.	Prior to discharging under this permit and within 90 days of completion of construction.
Install monitoring well at POC-2	Within 30 days of issuance of the permit
Submit a Well Installation Report to ADEQ for review pursuant to Section 2.7.5	Within 60 days of issuance of the permit.
The permittee shall begin monthly ambient groundwater quality sampling for 8 consecutive months at the POC-2 Well for the pollutants and parameters listed in section 4.2, Table IIA.	Within 90 days after permit issuance
The permittee shall submit a report on the groundwater quality data collected from the POC-2 well, along with a request to amend the permit with a recommendation for setting ALs and AQLs according to section 2.5.4.3 of the permit for parameters listed in Table IIB, Routine Groundwater Monitoring.	Within 12 months of permit issuance.

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable at permit issuance.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IA
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude	
1	Flow meter located at reclaimed water line		35° 07' 31.4" N	114° 32' 59.6" W	
2	Flow meter located at effluent line discharging to infiltration basin		35° 07' 30.1" N	114° 32' 59.1" W	
Parameter	AL ²	DL ³	Units	Sampling Frequency	Reporting Frequency
Total Flow ⁴ : Daily ⁵	Not Established ⁶	Not Established	mgd ⁷	Daily	Quarterly
Total Flow: Average Monthly	1.9	2.0	mgd	Monthly ⁸	Quarterly

²AL = Alert Level

³DL = Discharge Limit

⁴Total flow that is disposed through reuse and recharge through infiltration basins.

⁵Flow shall be measured using a continuous recording flow meter which totals the flow daily.

⁶Not Established means monitoring is required but no limits are specified.

⁷mgd = million gallons per day

⁸Monthly = Calculated value = Average of daily flows in a month.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IB
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
3	Downstream of the chlorine contact basin		35° 07' 30.8" N		114° 32' 59.9" W
Parameter	AL ⁹	DL ¹⁰	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single sample maximum	No Limit	23.0	CFU or MPN ¹¹	Daily	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week ¹²	Not established	Non-detect ¹³	CFU or MPN	Daily	Quarterly
Total Nitrogen ¹⁴ : Five-sample rolling geometric mean	8.0	10.0	mg/l	Monthly ¹⁵	Quarterly

⁹AL = Alert Level

¹⁰DL = Discharge Limit

¹¹CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample

¹²**Week** means a seven-day period starting on Sunday and ending on the following Saturday.

¹³If at least four (4) of seven (7) samples in a week are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has **not** been met).

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

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

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

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

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

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

Parameter	AL	DL	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
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
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

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IB
ROUTINE DISCHARGE MONITORING (continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Indicator Parameters / Major Cations and Anions:					
pH (field)	Monitor ¹⁶	Monitor	S.U.	Quarterly	Quarterly
Iron	Monitor	Monitor	mg/l	Quarterly	Quarterly
Manganese	Monitor	Monitor	mg/l	Quarterly	Quarterly
Total Organic Carbon	Monitor	Monitor	mg/l	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/l	Quarterly	Quarterly
Sodium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Potassium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Calcium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Magnesium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Chloride	Monitor	Monitor	mg/l	Quarterly	Quarterly
Sulfate	Monitor	Monitor	mg/l	Quarterly	Quarterly
Alkalinity	Monitor	Monitor	mg/l	Quarterly	Quarterly
Specific Conductivity (field)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly

¹⁶ Monitoring required, but no limits established.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IC
ROUTINE DISCHARGE MONITORING**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude	
4	Sampling tap at reclaimed water line ¹⁷		35° 07' 31.4" N	114° 32' 59.6" W	
5	Effluent line discharge to infiltration basin ¹⁸		35° 07' 28.9" N	114° 33' 5.5" W	
Parameter	AL ¹⁹	DL ²⁰	Units	Sampling Frequency	Reporting Frequency
Trihalomethanes (total) ²¹ (at sampling point # 4)	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) (at sampling point # 5)	0.08	0.1	mg/l	Semi-Annually	Semi-Annually

¹⁷ Samples for trihalomethanes in reclaimed water shall be collected at this point.

¹⁸ Sample for trihalomethanes in effluent delivered to the infiltration basins will be collected at this point.

¹⁹AL = Alert Level

²⁰DL = Discharge Limit

²¹ Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE ID
RECLAIMED WATER MONITORING - CLASS A+²²**

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
3	Downstream of the chlorine contact basin		35° 07' 30.8" N	114° 32' 59.9" W
Parameter	DL	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ²³ : Five-sample rolling geometric mean	10.0	mg/l	Monthly ²⁴	Quarterly
Fecal Coliform: Single-sample maximum	23	CFU or MPN ²⁵	Daily ²⁶	Quarterly
Fecal Coliform: Four of last seven samples	Non-detect ²⁷	CFU or MPN	Daily	Quarterly
Turbidity ²⁸ : Single reading	5.0	NTU ²⁹	Everyday ³⁰	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly
Enteric Virus ³¹ : Four of last seven samples	Non-detect	PFU ³²	Monthly / Suspended ³³	Quarterly

²²Reclaimed water monitoring under Table 1D shall be performed in addition to routine discharge monitoring required under Section 4.2, Tables 1A, IB, and IC.

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

²⁴A five-month geometric mean of the results of the five most recent samples.

²⁵CFU = Colony Forming Units per 100 ml; MPN = Most Probable Number per 100 ml. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

²⁶For 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 seven-day period are obtained and analyzed.

²⁷If at least four of the last seven samples are non-detect, report “yes” in the appropriate space on the SMRF (indicating that the standard has been met). If at least four of the last seven samples have detections of fecal coliform, report “no” in the appropriate space on the SMRF (indicating that the standard has **not** been met).

²⁸Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. Occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.

²⁹Nephelometric Turbidity Units

³⁰For the single turbidity reading, “everyday” means the maximum reading during the 24-hour period.

³¹Initial monthly enteric virus sampling shall be performed to indicate four out of seven sample results of non-detect.

³²Plaque Forming Units per 40 Liters. A value of <1.1 PFU/40 L shall be considered to be non-detect.

³³Enteric virus sampling shall resume only if two consecutive turbidity limits for the 24-hour average are exceeded. Monthly enteric virus monitoring shall continue until four out of seven 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 IIA
AMBIENT GROUNDWATER MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
6	Downgradient (west) of the infiltration basins, and is approximately 300 feet from the boundary of the PMA, ADWR Well # 55-909558			35° 07' 27.6" N	114° 33' 9.536" W
Parameter	AL ³⁴	AQL ³⁵	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ³⁶ :	N.E. ³⁷	N.E.	mg/l	Monthly	See footnote ³⁸
Nitrate-Nitrite as N	N.E.	N.E.	mg/l	Monthly	See footnote
Total Kjeldahl Nitrogen (TKN)	N.E.	N.E.	mg/l	Monthly	See footnote
Total Coliform	Absence	Absence ³⁹	CFU or MPN ⁴⁰	Monthly	See footnote
Metals (total):					
Antimony	N.E.	N.E.	mg/l	Monthly	See footnote
Arsenic	N.E.	N.E.	mg/l	Monthly	See footnote
Barium	N.E.	N.E.	mg/l	Monthly	See footnote
Beryllium	N.E.	N.E.	mg/l	Monthly	See footnote
Cadmium	N.E.	N.E.	mg/l	Monthly	See footnote
Chromium	N.E.	N.E.	mg/l	Monthly	See footnote
Cyanide (as free cyanide)	N.E.	N.E.	mg/l	Monthly	See footnote
Fluoride	N.E.	N.E.	mg/l	Monthly	See footnote
Lead	N.E.	N.E.	mg/l	Monthly	See footnote
Mercury	N.E.	N.E.	mg/l	Monthly	See footnote
Nickel	N.E.	N.E.	mg/l	Monthly	See footnote
Selenium	N.E.	N.E.	mg/l	Monthly	See footnote
Thallium	N.E.	N.E.	mg/l	Monthly	See footnote

³⁴ AL = Alert Level

³⁵ AQL= Aquifer Quality Limit.

³⁶ Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.

³⁷ N.E. = Not Established = Monitoring required, but no limits are specified.

³⁸ Within 12 months of permit issuance.

³⁹ A positive result for total coliform may be verified with an analysis for fecal coliform. A positive result for fecal coliform or *E. coli* shall be considered an exceedance of the AQL for total coliform.

⁴⁰ CFU = Colony Forming Units per 100 ml, MPN = Most Probable Number per 100 ml.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIA
AMBIENT GROUNDWATER MONITORING (continued)**

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
Benzene	N.E	N.E	mg/l	Monthly	See footnote
Carbon tetrachloride	N.E	N.E	mg/l	Monthly	See footnote
o-Dichlorobenzene	N.E	N.E	mg/l	Monthly	See footnote
para-Dichlorobenzene	N.E	N.E	mg/l	Monthly	See footnote
1,2-Dichloroethane	N.E	N.E	mg/l	Monthly	See footnote
1,1-Dichloroethylene	N.E	N.E	mg/l	Monthly	See footnote
cis-1,2-Dichloroethylene	N.E	N.E	mg/l	Monthly	See footnote
trans-1,2-Dichloroethylene	N.E	N.E	mg/l	Monthly	See footnote
Dichloromethane	N.E	N.E	mg/l	Monthly	See footnote
1,2-Dichloropropane	N.E	N.E	mg/l	Monthly	See footnote
Ethylbenzene	N.E	N.E	mg/l	Monthly	See footnote
Hexachlorobenzene	N.E	N.E	mg/l	Monthly	See footnote
Hexachlorocyclopentadiene	N.E	N.E	mg/l	Monthly	See footnote
Monochlorobenzene	N.E	N.E	mg/l	Monthly	See footnote
Styrene	N.E	N.E	mg/l	Monthly	See footnote
Tetrachloroethylene	N.E	N.E	mg/l	Monthly	See footnote
Toluene	N.E	N.E	mg/l	Monthly	See footnote
Trihalomethanes (total) ⁴¹	N.E	N.E	mg/l	Monthly	See footnote
1,1,1-Trichloroethane	N.E	N.E	mg/l	Monthly	See footnote
1,2,4 - Trichlorobenzene	N.E	N.E	mg/l	Monthly	See footnote
1,1,2 - Trichloroethane	N.E	N.E	mg/l	Monthly	See footnote
Trichloroethylene	N.E	N.E	mg/l	Monthly	See footnote
Vinyl Chloride	N.E	N.E	mg/l	Monthly	See footnote
Xylenes (Total)	N.E	N.E	mg/l	Monthly	See footnote

⁴¹Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIA
AMBIENT GROUNDWATER MONITORING (continued)**

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Indicator Parameters / Major Cations and Anions:					
pH (field)	Monitor ⁴²	Monitor	S.U.	Monthly	See footnote
Iron	Monitor	Monitor	mg/l	Monthly	See footnote
Manganese	Monitor	Monitor	mg/l	Monthly	See footnote
Total Organic Carbon	Monitor	Monitor	mg/l	Monthly	See footnote
Total Dissolved Solids	Monitor	Monitor	mg/l	Monthly	See footnote
Sodium	Monitor	Monitor	mg/l	Monthly	See footnote
Potassium	Monitor	Monitor	mg/l	Monthly	See footnote
Calcium	Monitor	Monitor	mg/l	Monthly	See footnote
Magnesium	Monitor	Monitor	mg/l	Monthly	See footnote
Chloride	Monitor	Monitor	mg/l	Monthly	See footnote
Sulfate	Monitor	Monitor	mg/l	Monthly	See footnote
Alkalinity	Monitor	Monitor	mg/l	Monthly	See footnote
Specific Conductivity (field)	Monitor	Monitor	µmhos/cm	Monthly	See footnote

⁴² Monitoring required, but no limits established.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIB
ROUTINE GROUNDWATER MONITORING**

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
6	Downgradient (west) of the infiltration basins, and is approximately 300 feet from the boundary of the PMA, POC # 2, ADWR Well # 55-909558			35° 07' 27.6" N	114° 33' 9.536" W
Parameter	AL ⁴³	AQL ⁴⁴	Units	Sampling Frequency	Reporting Frequency
Total Nitrogen ⁴⁵ :	Reserved ⁴⁶	Reserved	mg/l	Monthly	Quarterly
Nitrate-Nitrite as N	Reserved	Reserved	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Reserved	Reserved	mg/l	Monthly	Quarterly
Total Coliform	Reserved	Reserved	CFU or MPN ⁴⁷	Monthly	Quarterly
Metals (total):					
Antimony	Reserved	Reserved	mg/l	Quarterly	Quarterly
Arsenic	Reserved	Reserved	mg/l	Quarterly	Quarterly
Barium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Beryllium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Cadmium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Chromium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	Reserved	Reserved	mg/l	Quarterly	Quarterly
Fluoride	Reserved	Reserved	mg/l	Quarterly	Quarterly
Lead	Reserved	Reserved	mg/l	Quarterly	Quarterly
Mercury	Reserved	Reserved	mg/l	Quarterly	Quarterly
Nickel	Reserved	Reserved	mg/l	Quarterly	Quarterly
Selenium	Reserved	Reserved	mg/l	Quarterly	Quarterly
Thallium	Reserved	Reserved	mg/l	Quarterly	Quarterly

⁴³ AL = Alert Level

⁴⁴ AQL = Aquifer Quality Limit

⁴⁵ Total Nitrogen is equal to nitrate as N plus nitrite as N plus TKN.

⁴⁶ ALs and AQLs will remain reserved until the permittee submit ambient groundwater quality report.

⁴⁷ CFU = Colony Forming Units per 100 ml, MPN = Most Probable Number per 100 ml.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIB
ROUTINE GROUNDWATER MONITORING (continued)**

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
Benzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Carbon tetrachloride	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
o-Dichlorobenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
para-Dichlorobenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,2-Dichloroethane	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Dichloromethane	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,2-Dichloropropane	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Ethylbenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Hexachlorobenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Monochlorobenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Styrene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Tetrachloroethylene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Toluene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Trihalomethanes (total) ⁴⁸	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Trichloroethylene	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Vinyl Chloride	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually
Xylenes (Total)	Reserved	Reserved	mg/	Semi-Annually	Semi-Annually

⁴⁸Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

**TABLE IIB
ROUTINE GROUNDWATER MONITORING (continued)**

Parameter	AL	AQL	Units	Sampling Frequency	Reporting Frequency
Indicator Parameters / Major Cations and Anions:					
pH (field)	Monitor ⁴⁹	Monitor	S.U.	Quarterly	Quarterly
Iron	Monitor	Monitor	mg/l	Quarterly	Quarterly
Manganese	Monitor	Monitor	mg/l	Quarterly	Quarterly
Total Organic Carbon	Monitor	Monitor	mg/l	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/l	Quarterly	Quarterly
Sodium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Potassium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Calcium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Magnesium	Monitor	Monitor	mg/l	Quarterly	Quarterly
Chloride	Monitor	Monitor	mg/l	Quarterly	Quarterly
Sulfate	Monitor	Monitor	mg/l	Quarterly	Quarterly
Alkalinity	Monitor	Monitor	mg/l	Quarterly	Quarterly
Specific Conductivity (field)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly

⁴⁹ Monitoring required, but no limits established.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE III
FACILITY INSPECTION (Operational Monitoring)

Pollution Control Structures/Parameter	Performance Levels	Inspection Frequency	Reporting Frequency
Pump integrity	Good working condition	Daily	Quarterly
Treatment plant components	Good working condition	Daily	Quarterly
Sludge drying bed freeboard	Maintain One (1) foot	Weekly	Quarterly
Infiltration Basins Freeboard	Maintain 2 foot	Weekly	Quarterly

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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: 06/27/1991 (Original APP)
05/21/2004 (Other Amendment)
03/01/2007 (Significant Amendment)
2. Contingency Plan, dated: 06/27/1991 (Original APP)
03/01/2007 (Significant Amendment)
3. Final Hydrologist Report, dated: 08/19/2008 (significant amendment)
4. Final Engineering Report, dated: 03/06/2009 (significant amendment)
5. Public Notice, dated:
6. Public Hearing, dated: Not applicable
7. Responsiveness Summary, dated: Not applicable

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gpd as established by A.R.S. § 49-242(D).

6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an AWQS at the applicable POC for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), 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).