

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P- 100578
PLACE ID 979 LTF 69512
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 the City of Phoenix to operate the 23rd Avenue Wastewater Treatment Plant located at 2470 South 22nd Avenue, in Maricopa County, Arizona, of the Salt River Valley basin in the Upper Phoenix Active Management Area in Township 01N, Range 02E, Sections 13, SW¹/₄ of the 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: 23rd Avenue Wastewater Treatment Plant (WWTP)
Facility Address: 2470 South 22nd Avenue
Phoenix, Arizona 85009
County: Maricopa
Permitted Fee Flow Rate: 63,000,000 gallons per day (gpd).
Permittee: City of Phoenix Water Services Department
Permittee Address: 2474 South 22nd Avenue-Building 31
Phoenix, Arizona 85009
Facility Contact: Deputy Water Services Director
Emergency Phone No.: (602) 534-2921
Latitude/Longitude: 33°25' 25" N/ 112°06' 36" W
Legal Description: Township 01N, Range 02E, Section 13, SW¹/₄, Gila and Salt River
Baseline and Meridian

1.2 Authorizing Signature

Trevor Baggiore, Director,
Water Quality Division
Arizona Department of Environmental Quality
Signed this ____ day of _____, 2018

THIS AMENDMENT SUPERCEDES ALL PREVIOUS AMENDMENTS

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 23rd Avenue Wastewater Treatment Plant (WWTP), a 63.0 million gallons per day (mgd) activated sludge nitrification-denitrification treatment facility. The treatment process consists of mechanical screens, influent pump station, parshall flume, odor control equipment, grit removal basins, four primary sedimentation tanks, four aeration/biological removal basins and four secondary sedimentation basins, chemical flocculation and tertiary filtration, and disinfection through step chlorination and/or chloramination process.

The effluent maybe be disposed under the valid Arizona Pollutant Discharge Elimination System (AZPDES) Permit AZ0020559 to the Salt River through outfall #002 or up to 60,000 acre feet to the Roosevelt Irrigation District (RID) canal through outfall #004, and/or on-site reuse under a valid recycled water general permit R-105415. When the effluent is used for reuse the flows are diverted to the Reclaimed Water Basins. Effluent that is discharged under an AZPDES Permits shall be disinfected and dechlorinated prior to discharge to Outfall #002. The sludge is digested in four digesters and then mechanically dewatered.

The WWTP will produce reclaimed water meeting Class B+ Reclaimed Water Standards (A.A.C. R18-11, Article 3) and may be delivered for beneficial use under a valid recycled water general permit under A.A.C. R18-9, Article 7.

ADEQ has reviewed and approved this significant permit amendment to:

- Replace Fecal Coliform parameter with *E.coli* in Routine Discharge Monitoring and Reclaimed Water Monitoring Tables, Table IA and Table IB respectively.
- Change the monitoring frequency for asbestos, metals from monthly to quarterly in Routine Discharge Monitoring Table IA.
- Remove the monitoring of turbidity from Routine Discharge Monitoring Table IA.
- Remove the monitoring of Nitrate as N and Nitrite from Routine Discharge Monitoring Table IA.
- Change the monitoring frequency for Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs), Radionuclide, and Pesticides and PCBs from quarterly to semi-annually in Routine Discharge Monitoring Table IA.
- Change the disinfection process from chlorination to step chlorination and/or chloramination and add a new ammonium sulfate feed system for chloramination process.
- Change the sampling point for Reclaimed Water Monitoring sample.
- Add Escherichia coli (*E. coli*) as a verification test of a Total coliform positive test to show an exceedance of the AQL at monitoring well APP-2, in the Groundwater Monitoring Table II.
- Change the frequency for monitoring Total Nitrogen, Nitrate-Nitrite, Nitrate, Nitrite, Total Kjeldahl Nitrogen, and Total Coliform from monthly to quarterly in the Groundwater Monitoring Table II.
- Change the frequency for monitoring VOCs, SVOCs, Radionuclides, Pesticides and PCBs from quarterly to semi-annual in the Groundwater Monitoring Table II.

The site includes the following permitted discharging facilities:

Facility	Description	Latitude North	Longitude West
WWTP	Center of the WWTP	33° 25' 25" N	112° 06' 36" W
AZPDES Outfall #002	Effluent discharge to the Salt River from the pipeline at 35 th Ave	34° 34' 44" N	112° 07' 59" W
AZPDES Outfall #004	Effluent discharge to the Roosevelt Irrigation District (RID) canal from the junction structure pipeline	34° 25' 22" N	112° 06' 45" W

APP 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 63,000,000 gallons per day (gpd). If the facility is not yet constructed or is incapable of discharge at this time, the permittee may be eligible for reduced fees under the rule. Send all correspondence requesting reduced fees to the Water Quality Division of ADEQ. Please reference the permit number, LTF number and why reduced fees are requested under the rule.

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the life of the facility. The estimated closure and post-closure cost is \$5,377,978.00. The financial assurance mechanism was demonstrated through A.A.C. R18-9-A203C(B)(1) and (2).

2.2 Best Available Demonstrated Control Technology [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. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204 (B) (6) (b).

The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

2.2.1 Engineering Design

The Ammonium Sulfate Feed System was designed as per the as per the design report prepared and stamped, dated, and signed (sealed) by Gustavo V. Lopez, P.E. (Professional Engineer) Wilson Engineers, dated October 7, 2014.

2.2.2 Site-specific Characteristics

Site specific characteristics were not used to determine BADCT.

2.2.3 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.

2.2.4 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 B+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) and may be used for any allowable Class B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.5 Certified Area-wide Water Quality Management Plan Conformance

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

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

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

1. The permittee is authorized to operate the WWTP with a maximum average annual flow of 63.0 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(s) of Compliance [A.R.S. § 49-244]

The POC(s) are established by the following monitoring location(s):

POC #	POC Locations	Latitude North	Longitude West
1	Monitor Well # APP-2 located less than ¼-Mile northwest of the 35 Avenue outfall #002	33° 24' 47.4" N	112° 08' 01.8" W
2	Down gradient from the WWTP. (Conceptual well)	33° 25' 47" N	112° 06' 37" W
3	Down gradient from the outfall at the 27th Avenue alignment's storm water drainage. (Conceptual well)	33° 24' 50" N	112° 06' 58" W

Groundwater monitoring is required at POC #1 (APP-2) only. POC #2 and POC #3 have been designated as Conceptual POCs, to be considered in the future if groundwater conditions change at the facility.

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

2.5 Monitoring Requirements [A.R.S. § 49-243(B) and (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. Monitoring shall commence the first full monitoring period following permit issuance. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Pre-Operational Monitoring

Not applicable.

2.5.2 Discharge Monitoring

The permittee shall monitor the effluent according to Section 4.2, Table IA. Representative samples of the effluent shall be collected at the junction box after chlorination/dechlorination.

2.5.3 Reclaimed Water Monitoring

The permittee shall monitor the parameters listed under Table IB. Representative samples of the reclaimed water shall be collected at the reclaimed water basin.

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 indicator parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80 percent of the

original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as “dry” for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the SMRF.

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 or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is 50 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.

1. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed and reporting shall occur per Section 2.7.3
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. If all methods have detection limits higher than the applicable limit, the permittee shall follow the contingency requirements of Section 2.6 and may propose “other actions” including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. § 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, 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 Protection Value Stream for approval prior to installation and the permit shall be amended to include any new 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 plan.

Any AL that is exceeded or any 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. 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

2.6.2.1 Exceeding of Alert Levels Set for Operational Conditions

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

2.6.2.2 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 Protection Value Stream along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.
 4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1. Exceeding Permit Flow Limit

If the AL for average monthly flow in Section 4.2, Table IA has been exceeded, the permittee shall submit an application to the Groundwater Protection Value Stream 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.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

Not applicable.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

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

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

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

3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action, the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Protection Value Stream, that although an AL has been exceeded, pollutants are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Protection Value Stream.
4. Within 30 days after confirmation of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Protection Value Stream along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
6. The increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 4.2, Table II if the results of four (4) sequential sampling events demonstrate that no parameters exceed the AL.
7. If the increased monitoring required as a result of an AL exceedance continues for more than six (6) sequential sampling events, the permittee shall submit a second report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth sampling event.

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

Not required at time of issuance.

2.6.2.3.4 Alert Level for Groundwater Level

1. If an alert level for groundwater level established in Section 4.2, Table II is not within the allowable range, the permittee shall submit a written report within 30 days after becoming aware of the exceedance. The report shall document the following:
 - a. the as-built configuration of the well including the screened interval;
 - b. all groundwater level measurements available for the well;

- c. a discussion and analysis of any trends or seasonal variations in the groundwater level measurements;
 - d. information on groundwater recharge, withdrawal, or other hydrologic conditions in the vicinity of the well, and;
 - e. any other pertinent information obtained by the permittee.
2. If an alert level for groundwater level established in Section 4.2, Table II is not within the allowable range for more than 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 Limitations Violations

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 Protection Value Stream according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, notification of downstream or downgradient users who may be directly affected by the discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

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

2.6.4 Aquifer Quality Limit Violation

1. If an AQL set in Section 4.2, Table II has been exceeded, the permittee may conduct verification sampling within five (5) days of becoming aware of the exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If the verification sample does not confirm an AQL violation, no further action is needed under this Section.
3. If verification sampling confirms that an AQL was violated for any parameter or if the permittee opts not to perform verification sampling, then, the permittee shall increase the

frequency of monitoring as follows:

Specified Monitoring Frequency (Section 4.2, 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.

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 That Are Not Addressed Elsewhere in Section 2.6

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the Groundwater Protection Value Stream within 24 hours upon discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL to be exceeded, or (b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of

non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Groundwater Protection Value Stream within 24 hours upon discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL to be exceeded, 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 Groundwater Protection Value Stream within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that 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 and actions identified in the approved contingency plan approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceeding 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; 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 Groundwater Protection Value Stream, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements

[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self-monitoring Report Form (SMRF)

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) provided by ADEQ, and submit the completed report through the myDEQ online reporting system or to the Groundwater Protection Value Stream.
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” with an explanation on the SMRF and submit the report to ADEQ.
3. The tables contained in Section 4.2 list the monitoring parameters and the frequencies for reporting result on the SMRF:
 - Table IA- Routine Discharge Monitoring
 - Table IB- Reclaimed Water Monitoring
 - Table II - Groundwater Monitoring

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

2.7.2 Operation Inspection / Log Book Recordkeeping

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

1. Name of inspector;
2. Date and time inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book; and
7. 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 Groundwater Protection Value Stream in writing within 5 days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation or of an AL exceedance.
2. The permittee shall submit a written report to the Groundwater Protection Value Stream within 30 days of becoming aware of the violation of any permit condition or discharge limitation. 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 its cause;
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
 - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
 - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
 - e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
 - f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

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

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
Groundwater Protection Value Stream
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4681

Or

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

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

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

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

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

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

Monitoring conducted:	Report due by:
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Protection Value Stream shall be notified within 15 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Groundwater Protection Value Stream before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.

4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report “temporary cessation” in the comment section.

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

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

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

2.9.1 Closure Plan

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

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

2.9.2 Closure Completion

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

1. Clean closure cannot be achieved at the time of closure notification or within 1 year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with 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/or
5. Further action is necessary to meet property use restrictions.
6. SMRF submittals are still required until Clean Closure is issued.

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

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

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater 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 insurance.

DRAFT

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

Not required at permit issuance

DRAFT

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Junction Box after dechlorination		33° 25' 22" N		112° 06' 45" W
Parameter	AL ¹	DL ²	Units	Sampling Frequency	Reporting Frequency
Total Flow ³ : Daily ⁴	Not Established ⁵	Not Established	mgd ⁶	Daily	Quarterly
Total Flow: Average Monthly	Not Established	63.0	mgd	Monthly Calculation ⁷	Quarterly
Reuse Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
Reuse Flow: Monthly Average	Not Established	63.0	mgd	Monthly Calculation	Quarterly
AZPDES outfall #002 ⁸ Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
AZPDES outfall #002 Flow: Monthly Average	Not Established	63.0	mgd	Monthly Calculation	Quarterly
AZPDES outfall #004 ⁹ Flow: Daily	Not Established	Not Established	mgd	Daily	Quarterly
AZPDES outfall #004 Flow: Monthly Average	Not Established	63.0	mgd	Monthly Calculation	Quarterly

¹ AL = Alert Level

² DL = Discharge Limit

³Total flow= sum of flows to reuse/discharge. Discharge flows = Outfall 002 and Outfall 004.

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

⁵Not Established = Monitoring required but no limits have been specified at time of permit issuance.

⁶mgd = million gallons per day

⁷Monthly = Calculated value = Average of daily flows in a month.

⁸Salt River from the pipeline at 35th Avenue.

⁹Roosevelt Irrigation District Canal system from the juncture structure pipeline.

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING -continued

Parameter	AL ¹⁰	DL ¹¹	Units	Sampling Frequency	Reporting Frequency
<i>E. coli</i> : Single sample maximum	Not Established	504	CFU	Daily ¹²	Quarterly
<i>E. coli</i> : four (4) of seven (7) samples in a week ¹³	Not Established	126 ¹⁴	CFU	Weekly Calculation	Quarterly
Total Nitrogen ¹⁵ : Five-sample rolling geometric mean ¹⁶	8.0	10.0	mg/l	Monthly	Quarterly
Asbestos	Reserved	7.0	mfl ¹⁷	Quarterly	Quarterly
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

¹⁰ AL = Alert Level

¹¹ DL = Discharge Limit

¹² For *E. coli*, “daily” sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each calendar week are obtained and analyzed.

¹³ **Week** means a seven-day period starting on Sunday and ending on the following Saturday.

¹⁴ *E. coli* four (4) of the last seven (7) samples” requires entering a “Compliance” or “Not in Compliance” on the SMRF for each day of the reporting period; use the following procedure to determine whether to enter a “Compliance” or “Not in Compliance” for each daily entry: For each date of the reporting period, evaluate the daily *E. coli* result for that date along with the daily *E. coli* results for the six previous days. If, of these seven days of data, four (4) are less than or equal to 126 CFU, report “Compliance” for that date’s entry on the SMRF. If three (3) or fewer of the daily *E. coli* results are greater than 126 CFU, report “Not in Compliance” for that date’s entry on the SMRF. For days when there is no flow of reclaimed water, the daily *E. coli* result is considered “Compliance” for the purpose of evaluating the seven days of daily data for the SMRF entry.

¹⁵ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

¹⁶ The 5-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together then taking the fifth root of the product. Example: $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

¹⁷ mfl = million fibers/liter

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING -continued

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Benzo(a) pyrene	0.00016	0.0002	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
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Di (2-ethylhexyl) adipate	0.32	0.4	mg/l	Semi-Annually	Semi-Annually
Bis (2-ethylhexyl) pthalate	0.0048	0.006	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
Pentachlorophenol	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
2,3,7,8-TCDD (Dioxin)	0.000000024	0.00000003	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	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)	0.08	0.10	mg/l	Semi-Annually	Semi-Annually
1,2,4-Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.20	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	10	mg/l	Semi-Annually	Semi-Annually

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA
ROUTINE DISCHARGE MONITORING -continued

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Radionuclides:					
Gross Alpha (including Radium-226 but excluding Radon and Uranium)	12.0	15.0	pCi/l	Semi-Annually	Semi-Annually
Gross Beta	40.0	50.0	pCi/l	Semi-Annually	Semi-Annually
Radium 226 & Radium 228	4.0	5.0	pCi/l	Semi-Annually	Semi-Annually
Pesticides & PCBs:					
Alachlor	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Carbofuran	0.032	0.04	mg/l	Semi-Annually	Semi-Annually
Chlordane	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Dalapon	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2-dibromo-3-chloropropane	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
2,4,-dichlorophenoxyacetic Acid	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
Dinoseb	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
Diquat	0.016	0.02	mg/l	Semi-Annually	Semi-Annually
Endothall	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Endrin	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Ethylene Dibromide(EDB)	0.00004	0.00005	mg/l	Semi-Annually	Semi-Annually
Glyphosate	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Heptachlor	0.00032	0.0004	mg/l	Semi-Annually	Semi-Annually
Heptachlor Epoxide	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Lindane	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Methoxychlor	0.032	0.04	mg/l	Semi-Annually	Semi-Annually
Oxamyl	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
Picloram	0.4	0.5	mg/l	Semi-Annually	Semi-Annually
Polychlorinated Biphenyls	0.0004	0.0005	mg/l	Semi-Annually	Semi-Annually
Simazine	0.0032	0.004	mg/l	Semi-Annually	Semi-Annually
Toxaphene	0.0024	0.003	mg/l	Semi-Annually	Semi-Annually
2,4,5-Trichlorophenoxypropionic Acid (2,4,5-TP or Silvex)	0.04	0.05	mg/l	Semi-Annually	Semi-Annually

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS B+

Sampling Point Number	Sampling Point Identification		Latitude	Longitude
2	Sampling point located at Reclaimed Water Basin		33° 25' 22.42" N	112° 06' 38.03" W
Parameter	AL ¹⁸	Units	Sampling Frequency	Reporting Frequency
<i>E.coli</i> : Single sample maximum	504	CFU	Daily ¹⁹	Quarterly
<i>E.coli</i> : four (4) of seven (7) samples in a week ²⁰	126 ²¹	CFU	Daily Evaluation	Quarterly
Total Nitrogen ²² : Five-sample rolling geometric mean ²³	10.0	mg/l	Monthly	Quarterly

¹⁸ AL = Alert Level

¹⁹ For *E.coli*, “daily” sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four samples in each week are obtained and analyzed.

²⁰ **Week** means a seven-day period starting on Sunday and ending on the following Saturday.

²¹ *E. coli* four (4) of the last seven (7) samples” requires entering a “Compliance” or “Not in Compliance” on the SMRF for each day of the reporting period; use the following procedure to determine whether to enter a “Compliance” or “Not in Compliance” for each daily entry: For each date of the reporting period, evaluate the daily *E. coli* result for that date along with the daily *E. coli* results for the six previous days. If, of these seven days of data, four (4) or are less than or equal to 126 CFU report “Compliance” for that date’s entry on the SMRF. If three (3) or fewer of the daily *E. coli* results are greater than 126 CFU, report “Not in Compliance” for that date’s entry on the SMRF. For days when there is no flow of reclaimed water, the daily *E. coli* result is considered “Compliance” for the purpose of evaluating the seven days of daily data for the SMRF entry.

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

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

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
3	Well #APP -2			33° 24' 47.7" N	112° 08' 01.8" W
Parameter	AL ²⁴	AQL ²⁵	Units	Sampling Frequency	Reporting Frequency
Water Level	Reserved	N/A	Feet bgs ²⁶	Semi-annually	Semi-annually
Asbestos	Reserved	7.0	mfl ²⁷	Quarterly	Quarterly
Total Nitrogen ²⁸ :	8.0	10.0	mg/l ²⁹	Quarterly Calculation	Quarterly
Nitrate-Nitrite as N	8.0	10.0	mg/l	Quarterly Calculation	Quarterly
Nitrate as N	8.0	10.0	mg/l	Quarterly	Quarterly
Nitrite as N	0.8	1.0	mg/l	Quarterly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Not Established ³⁰	Not Established	mg/l	Quarterly	Quarterly
Total Coliform	N/A	Absence ³¹	P/A ³²	Quarterly	Quarterly
Metals (Total Recoverable)					
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

²⁴ AL = Alert Level

²⁵ AQL = Aquifer Quality Limit

²⁶ bgs= Below Ground Surface

²⁷ mfl = million fibers/liter

²⁸ Total Nitrogen is equal to Nitrate as N plus Nitrite as N plus TKN. Use samples collected at the same time to determine Total Nitrogen.

²⁹ mg/l = milligrams per liter

³⁰ Not Established means monitoring is required, but no limits are specified.

³¹ If Total Coliform has a positive result then an analysis for *E coli* needs to be performed. If the *E coli* analysis is also positive is also positive than it is considered and exceedance of the AQL for Total Coliform. If the results of the *E coli* analysis is negative than results for Total Coliform is negative.

³² P/A = Presence or absence of total coliforms in a 100-milliliter sample.

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING - continued

Parameter	AL	AQ	Units	Sampling Frequency	Reporting Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-annually	Semi-annually
Benzo(a) pyrene	0.00016	0.0002	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
Di (2-ethylhexyl) adipate	0.32	0.4	mg/l	Semi-annually	Semi-annually
Bis (2-ethylhexyl) phthalate	0.0048	0.006	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
Pentachlorophenol	0.0008	0.001	mg/l	Semi-annually	Semi-annually
2,3,7,8-TCDD (Dioxin)	.000000024	0.00000003	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) ³³	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

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

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE II
GROUNDWATER MONITORING - continued

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Radionuclides:					
Gross Alpha (including Radium-226 but excluding Radon and Uranium)	12.0	15.0	pCi/l	Semi-Annually	Semi-Annually
Gross Beta	40.0	50.0	pCi/l	Semi-Annually	Semi-Annually
Radium 226 & Radium 228	4.0	5.0	pCi/l	Semi-Annually	Semi-Annually
Pesticides & PCBs:					
Alachlor	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Carbofuran	0.032	0.04	mg/l	Semi-Annually	Semi-Annually
Chlordane	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Dalapon	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2-dibromo-3-chloropropane	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
2,4,-dichlorophenoxyacetic Acid	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
Dinoseb	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
Diquat	0.016	0.02	mg/l	Semi-Annually	Semi-Annually
Endothall	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Endrin	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Ethylene Dibromide(EDB)	0.00004	0.00005	mg/l	Semi-Annually	Semi-Annually
Glyphosate	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Heptachlor	0.00032	0.0004	mg/l	Semi-Annually	Semi-Annually
Heptachlor Epoxide	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Lindane	0.00016	0.0002	mg/l	Semi-Annually	Semi-Annually
Methoxychlor	0.032	0.04	mg/l	Semi-Annually	Semi-Annually
Oxamyl	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
Picloram	0.4	0.5	mg/l	Semi-Annually	Semi-Annually
Polychlorinated Biphenyls	0.0004	0.0005	mg/l	Semi-Annually	Semi-Annually
Simazine	0.0032	0.004	mg/l	Semi-Annually	Semi-Annually
Toxaphene	0.0024	0.003	mg/l	Semi-Annually	Semi-Annually
2,4,5-Trichlorophenoxypropionic Acid (2,4,5-TP or Silvex)	0.04	0.05	mg/l	Semi-Annually	Semi-Annually

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE III

FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK³⁴

Pollution Control Structures/Parameter	Performance Levels	Inspection Frequency
Pump Systems Functional Integrity ³⁵	Good Working Condition	Weekly
Treatment Plant Units	Good Working Condition	Weekly

³⁴ 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.

³⁵ Pump System Functional Integrity means inspections of the following: Filter Inlet Pump Station (FIPS), Return Activated Sludge Pumps (RAS), Primary Sludge Pump System, Internal Mixed Return Pumps (IMLR), Non-Potable Water System (NPW), Digester Pump System, Filter Backwash Pump System, Solid Handling Facility Pumping System (SHP), Odor Control Pump System and Ferric Pump System.

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: January 5, 2018
2. Contingency Plan, dated: January 18, 1991
3. Final Hydrologist Report, dated: April 17, 2018
4. Final Engineering Report, dated: April 11, 2018
5. Public Notice, dated: TBD
6. Public Hearing, dated: Not applicable
7. Responsiveness Summary, dated: Not applicable

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6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

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

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

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 at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard 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.
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. §§ 41-1009, 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 specified by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension & 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, renewed, or revoked for cause, under the rules of the Department.

The permittee shall notify the Water Permits 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).