STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-511628
PLACE ID 147575 LTF 104849
SIGNIFICANT AMENDMENT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2, and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality (ADEQ) hereby authorizes City of Tucson to operate the South Houghton Area Recharge Project (SHARP) located at 9900 East Drexel Road, Tucson, Pima County, Arizona over the groundwater of the Tucson Active Management Area.

This permit becomes effective on the date of the Water Quality Division Deputy Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1. PERMITTEE INFORMATION

Facility Name:	City of Tucson – South Houghton Area Recharge Project (SHARP)
Facility Address:	9900 East Drexel Road Tucson, Arizona 85747
County:	Pima
Permitted Flow Rate:	7,141,460 gallons per day (gpd)
Permittee:	City of Tucson – Tucson Water Department (TWD)
Permittee Address:	P.O. Box 2721 Tucson, Arizona 85726
Facility Contact:	Asia Philbin, Chief Hydrologist
Emergency Phone No.:	(520) 837 – 2101
Latitude/Longitude:	32° 08' 49" N / -110° 46' 57" W
Legal Description:	Township 15 S, Range 15 E, Section 11, NW¼, NE¼, NW & NE & SW & SE of the Gila and Salt River Baseline and Meridian

1.2. AUTHORIZING SIGNATURE

_____

Randall Matas, Deputy Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this _____ day of _____, 2026

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2.0 SPECIFIC CONDITIONS

[A.R.S. §§ 49-203(4), 49-241(A)]

2.1. FACILITY / SITE DESCRIPTION

[A.R.S. § 49-243(K)(8)]

The City of Tucson – Tucson Water Department (TWD) is authorized to operate the South Houghton Area Recharge Project (SHARP) recharge/underground storage facility. The SHARP is designed to recharge up to 7,141,460 gallons per day (gpd) with a maximum total of 8,000 acre-feet per year (ac ft/yr) of Class A Reclaimed Water from the TWD - Houghton Reclaimed Reservoir (HRR). Class A+ Reclaimed Water from the Tucson Reclaimed Water Treatment Plant (RWTP, APP #100147), water pumped directly into the reclaimed distribution system from Sweetwater Recharge Facilities (SRF; APP #103370) recovery wells and remediated groundwater from the Tucson Airport Remediation Project (TARP) is conveyed to the HRR through a 30-inch transmission pipeline which runs along the west and south boundaries of the SHARP site. The SHARP Basins (recharge basins) are located within a 40-acre desert landscaped parcel (141-02-0250) owned by TWD adjacent to the HRR approximately 0.4 miles west of Houghton Road, south of Drexel Road.

The SHARP consists of four (4) recharge basins that cover 9.9 acres total of wetted surface area. The individual basins are laid out in a diamond pattern to conform to local topography. Reclaimed water will be gravity fed from the HRR to the basins where the water will percolate through the vadose zone to the regional aquifer. The permittee has Underground Storage Facility and Water Storage Permits issued by Arizona Department of Water Resources (ADWR) for this facility.

The recharge basins will be operated using alternating wetting (filling) and drying cycles. A sustainable infiltration rate of 3.03 feet per day (ft/d) has been demonstrated based on operational data from 2021 to 2023. The proposed permit volume of 8,000 ac ft/yr can be accommodated at the facility assuming a 75% duty cycle at each basin, 9.9 acres of recharge area, and a sustainable infiltration rate of 3.03 ft/day.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES

Facility	Basin Size (acres)	Latitude (North)	Longitude (West)
Recharge Basin 301 (RB-301)	2.6	32° 08' 50"	110° 46' 55"
Recharge Basin 302 (RB-302	2.7	32° 08' 46"	110° 47' 05"
Recharge Basin 303 (RB-303)	2.6	32° 08' 50"	110° 47' 06"
Recharge Basin 304 (RB-304)	1.99	32° 08' 51"	110° 47' 00

2.1.1. Annual Registration Fee

[A.R.S. § 49-242 and A.A.C. R18-14-104]

The annual registration fee for this permit is payable to ADEQ each year. The annual registration fee flow rate is established by the permitted flow rate identified in Section 1.1. If the facility is not constructed or is incapable of discharge, the permittee may be eligible for reduced fees pursuant to Table 2 under A.A.C. R18-14-104(A). Send all correspondence requesting reduced fees to ADEQ. Please reference the permit number, LTF number, and the reason for requesting reduced fees under this rule.

2.1.2. Financial Capability

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is $2,374,578. The financial capability was demonstrated through A.A.C. R18-9-A203(B)(1) and (2).

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

Not applicable per A.A.C. R18-9A201(C) for a storage facility.

2.2.1. Engineering Design

Three recharge basins (Recharge Basins 301, 302, and 303) were designed by CH2M employing registered professionals in the State of Arizona. The design report was dated June 2015.

The fourth recharge basin (Recharge Basin 304) was designed by Jacobs Engineering Group, Inc., as per the Final Basis of Design Report and design plans signed, dated, and sealed by Kristen Griebel, P.E (Civil #52395) on January 14, 2025.

2.2.1.1. Recharge Basin 301

The basin is irregular in shape with minimum 60-foot diameter radius and is approximately 2.6 acres in size. The basin is approximately 6.75 feet deep (average) with a bottom elevation of 2866.0 feet above mean sea level (ft amsl) (low end). Basin side slopes will be 3H:1V (Horizontal:Vertical); one foot of aggregate base (3-inch minus) with compacted subgrade (95-percent); with a geotextile filter fabric (on-slope) in contact with the aggregate base. A 15-foot wide access ramp with 6H:1V slope will be provided into Recharge Basin 301.

2.2.1.2. Recharge Basin 302

The basin is irregular in shape with minimum 60-foot diameter radius and is approximately 2.7 acres in size. The basin is approximately 9.50 feet deep (average) with a bottom elevation of 2861.0 ft amsl (low end). Basin side slopes will be 3H:1V; one foot of aggregate base (3-inch minus) with compacted subgrade (95-percent); with a geotextile filter fabric (on-slope) in contact with the aggregate base. A 15-foot wide access ramp with 6H:1V slope will be provided into Recharge Basin 302.

2.2.1.3. Recharge Basin 303

The basin is irregular in shape with minimum 60-foot diameter radius and is approximately 2.6 acres in size. The basin is approximately 9.00 feet deep (average) with a bottom elevation of 2857.5 ft amsl (low end). Basin side slopes will be 3H:1V; one foot of aggregate base (3-inch minus) with compacted subgrade (95-percent); with a geotextile filter fabric (on-slope) in contact with the aggregate base. A 15-foot wide access ramp with 6H:1V slope will be provided into Recharge Basin 303.

2.2.1.4. Recharge Basin 304

The basin is irregular in shape with minimum 60-foot diameter radius on the west end of the basin and is approximately 1.99 acres in size. The basin ranges from approximately 8 to 14 feet deep with a bottom elevation of 2857.48 ft amsl. Basin side slopes will be 3H:1V; one foot of aggregate base (3-inch minus) with compacted subgrade (95-percent); with a geotextile filter fabric (on-slope) in contact with the aggregate base. A 15-foot wide access ramp with 6H:1V slope will be provided into Recharge Basin 304.

2.2.2. Site-Specific Characteristics

The projected maximum groundwater level rise in the regional aquifer during simulated recharge with no recovery operations at 8,000 ac ft/yr is approximately 117 feet after 20 years, and projected minimum depth to groundwater level in the regional aquifer is approximately 100 feet below land surface (bls). Based on the submitted report, these model projections indicate that the storage capacity of the aquifer is more than adequate to accommodate the proposed recharge volume.

2.2.3. Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the control center; 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 10: FACILITY INSPECTION AND 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 in the facility log book as per Section 2.7.2 and reported to ADEQ in the event of a violation or exceedance per Section 2.7.3.

2.2.4. Reclaimed Water Classification

[A.A.C. R18-9-B701(C)(2)(a), A.A.C. R18-11-303 through 307]

Not Applicable

2.2.5. Certified Areawide Water Quality Management Plan Conformance

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

Not applicable

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 recharge facility with a maximum average monthly flow of 7.14 million gallons per day (mgd) or 8,000 ac ft/yr.
2. Specific discharge limitations are listed in Section 4.2, Table 8: ROUTINE DISCHARGE MONITORING.

2.4. POINT OF COMPLIANCE (POC)

[A.R.S. § 49-244]

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

Table 2: POINT OF COMPLIANCE					
POC #	**POC Location**	**Latitude (North)**	**Longitude (West)**	**ADWR Registration #**	**Screen Interval (feet bls)**
1A	POC #1A, Well WR-705A, is located approximately 330 feet northwest (down- gradient) of Recharge Basin 303.	32°08'50.79"	110°47'07.01"	55-227179	325 – 405
1B	POC #1B, Well WR-705B	32°08'50.93"	110°47'06.57"	55-236059	210 – 330
2A	POC #2A, Well WR-706A, is located approximately 650 feet southeast (up- gradient) of Recharge Basin 301	32°08'44.91"	110°46'47.94"	55-227178	315 – 395
2B	POC #2B, Well WR-706B	32°08'45.25"	110°46'48.00"	55-928522	200 – 320

The depth to groundwater at the site is approximately 267 feet bls. The overall direction of groundwater flow is to the west-northwest.

Groundwater monitoring is required at the point of compliance wells with the exception of POC #1A (WR-705A) and POC #2A (WR-706A). If the alert level for water level in POC #1B (WR-705B) is exceeded (WL > 320 ft bls), contingency POC monitoring shall commence at POC #1A (WR-705A) in accordance with Section 4.2, Table 9: GROUNDWATER MONITORING. 320 ft bls is the top of gravel pack of the screened interval at WR-705B.

If the alert level for water level in POC #2B (WR-706B) is exceeded (WL > 310 ft bls), contingency POC monitoring shall commence at POC #2A (WR-706A) per Section 4.2, Table 9: GROUNDWATER MONITORING. 310 ft bls is the top of gravel pack of the screened interval at WR-706B.

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

2.5. MONITORING REQUIREMENTS

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

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

2.5.1. Pre-Operational Monitoring

Not Applicable.

2.5.2. Routine Discharge Monitoring

The permittee shall monitor the effluent according to Section 4.2, Table 8: ROUTINE DISCHARGE MONITORING. Representative samples of the effluent shall be collected at the entry point of reclaimed water into the distribution system (Sampling Point 522) and at entry point of TARP water (Sampling Point TR-054T).

2.5.3. Reclaimed Water Monitoring

Not Applicable.

2.5.4. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING.

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

2.5.5. Groundwater Monitoring and Sampling Protocols

Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80 percent of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the SMRF.

The permittee may conduct the sampling using low-flow purging methods in accordance with EPA, USGS, or DOD protocols. The well must be purged until indicator parameters stabilize. Indicator parameters shall include dissolved oxygen, turbidity, pH, temperature, and conductivity.

As a third alternative method for sampling within POC wells with very low recharge rates, the permittee may conduct the sampling using no-purge sampling techniques using HydraSleeve™ or similar type methodology. Otherwise, POC wells that are able to be purged, may conduct sampling using no-purge sampling techniques using HydraSleeve™ or similar type methodology, upon completion of a comparison sampling event by first collecting a groundwater sample by the no-purge method, followed by a groundwater sample collected using either the three-borehole volume or low-flow purging methods described above. If the results between the two sampling methods are within a relative percent difference of 10 percent, the no-purge method may be considered an acceptable method of sampling. The use of HydraSleeve™ or similar type samplers shall follow accepted EPA, USGS, or DOD protocols. In addition, the HydraSleeve™ or similar type sampler shall be placed just below the water table.

2.5.5.1. POC Well Replacement

In the event that one or more of the designated POC wells should become unusable or inaccessible due to damage, exceedance of an alert level (AL) for water level as required by Section 2.6.2.3.4, or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is fifty feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well may apply to the replacement well.

2.5.6. Surface Water Monitoring and Sampling Protocols

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

2.5.7. Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable contingency requirements of Section 2.6 Contingency Plan Requirements 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 state-certified laboratories in Arizona can be obtained at the address below:

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

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to ADEQ 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, R18-9-A205)]

2.6.1. General Contingency Plan Requirements

The permittee shall prepare and implement a contingency plan consistent with the circumstances and actions described in Sections 2.6.2 through 2.6.5 and with A.A.C. R18-9-A204. At least one copy of this permit and the contingency plan, referenced in Section 5.0, shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall revise the contingency plans upon any significant change to the information contained in the plan.

Any AL exceedance, or violation of an AQL, DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3 Permit Violation and Alert Level Status Reporting, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

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

2.6.2. Exceeding of Alert Levels and Performance Levels

2.6.2.1. Exceeding of Performance Levels Set for Operational Conditions

If a performance level set in Section 4.2, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

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

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

1. If an AL set in Section 4.2, Table 8: ROUTINE DISCHARGE MONITORING has been exceeded, the permittee shall investigate to determine the cause of the AL exceedance within 24 hours, or as soon as practicable. 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 contingency plan referenced in Section 2.6.1 General Contingency Plan Requirements 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 Corrective Actions.
3. Within thirty (30) days of an AL exceedance, the permittee shall submit the laboratory results to ADEQ per Section 2.7.5 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, ADEQ 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 the Cumulative Annual Discharge in Table 8: ROUTINE DISCHARGE MONITORING has been exceeded, the permittee shall submit an application to ADEQ for a permit amendment to expand the SHARP 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

No ALs have been established for indicator parameters.

2.6.2.3.2. Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

1. In the case of an exceedance of an AL for a pollutant set in Section 4.2, Table 9: GROUNDWATER MONITORING, the permittee may conduct verification sampling for those pollutant(s) that exceeded their respective AL(s) within five (5) days of becoming aware of the exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.

2. If verification sampling confirms the AL exceedance or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring for each pollutant exceeding its' respective AL(s) as follows:

Table 3: ACCELERATED MONITORING - ALERT LEVEL EXCEEDANCE	
Specified Monitoring Frequency	**Monitoring Frequency for AL Exceedance**
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually	Quarterly

In addition, the permittee shall initiate an investigation of the cause of the AL exceedance within 24 hours, or as soon as practicable, 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 contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 CONTINGENCY PLAN REQUIREMENTS 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 ADEQ, that although an AL has been exceeded, the pollutant(s) that exceeded their respective AL(s) are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency, for those pollutant(s) that exceeded their respective AL(s), for approval in writing by ADEQ.

4. Within thirty (30) days after confirmation of an AL exceedance, for each pollutant that exceeded an AL, the permittee shall submit the laboratory results to ADEQ per Section 2.7.5 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, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

6. For each pollutant that exceeded an AL, the increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 4.2, Table 9: GROUNDWATER MONITORING if the results of four sequential sampling events of those pollutants demonstrate that they did not exceed the AL.

7. If the increased monitoring required as a result of an AL exceedance continues for more than six (6) sequential sampling events, the permittee shall submit to ADEQ per Section 2.7.5 a second report documenting an investigation of each pollutant which continued to exceed an AL. This report is due within thirty (30) days of the receipt of laboratory results of the sixth sampling event.

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

Not required at time of issuance.

2.6.2.3.4. Alert Level for Groundwater Level

1. If monitoring indicates the groundwater level is not within the allowable range for POC-1B or POC-2B established by the Alert Level (AL) in Section 4.2, Table 9: GROUNDWATER MONITORING, the permittee shall notify ADEQ within thirty (30) days, report monitoring as "dry well" for the POC well in violation of the Alert Level, and begin sampling at the respective contingency POC well (POC-1A in place of POC-1B, POC-2A in place of POC-2B) for all analytes in Section 4.2, Table 9: GROUNDWATER MONITORING.
2. If monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2, Table 9: GROUNDWATER MONITORING for more than 4 sequential sampling events, the permittee shall submit a report which evaluates the cause(s) of the exceedance and recommends whether the well should be replaced pursuant to Section 2.5.5.1. The report shall discuss and demonstrate whether samples representative of the water quality of the relevant aquifer can be practicably obtained from the well.
3. Upon review of the submitted report, ADEQ may amend the permit to require replacement of the well, require additional permit conditions, or other actions.

2.6.3. Discharge Limit Violation

1. If a DL set in Section 4.2, Table 8: ROUTINE DISCHARGE MONITORING or Section 4.2, Table 9: GROUNDWATER MONITORING has been violated, the permittee shall investigate to determine the cause within 24 hours, or as soon as practicable. 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 ADEQ 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, ADEQ 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 9: GROUNDWATER MONITORING has been exceeded, the permittee may conduct verification sampling for those pollutant(s) that were above their respective AQL(s) within five (5) days of becoming aware of the exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling does not confirm an AQL exceedance, no further action is needed under this Section.
3. If verification sampling confirms that an AQL was exceeded for any parameter, or if the permittee opts not to perform verification sampling, then, the permittee shall increase the frequency of monitoring for those parameters as follows:

Table 4: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION	
Specified Monitoring Frequency	**Monitoring Frequency for AQL Violation**
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually/Biennially	Quarterly

In addition, the permittee shall initiate an evaluation for the cause of the violation within 24 hours, or as soon as practicable, 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 Permit Violation and Alert Level Status Reporting, 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 thirty (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 the contingency plan, or separately approved according to Section 2.6.6 Corrective Actions.

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

5. The increased monitoring for those pollutant(s) required as a result of an AQL exceedance may be reduced to the original sampling frequency for each respective pollutant, if the results of three (3) sequential sampling events demonstrate that the parameter(s) does not exceed their respective AQL(s), and upon ADEQ approval.

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[A.R.S. § 49-201(12) and § 49-241]

2.6.5.1. Duty to Respond

Within 24 hours, or as soon as practicable, the permittee shall act 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 ADEQ 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 ADEQ within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AQL exceedance, or could pose an endangerment to public health or the environment.

2.6.5.4. Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to ADEQ per Section 2.7.5 within thirty (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 Permit Violation and Alert Level Status Reporting. 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 CONTINGENCY PLAN REQUIREMENTS 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 Emergency Response and Contingency Requirements for Unauthorized Discharges, the permittee shall obtain written approval from ADEQ prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, AQL, DL, or another permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within thirty (30) days of completion of any corrective action not specified in 2.6.1 through 2.6.5, the operator shall submit to ADEQ per 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), A.A.C. R18-5-104, R18-9-A206(B), and R18-9-A207]

2.7.1. Self-Monitoring Report Form

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) provided by ADEQ, and submit the completed report through the myDEQ online reporting system per Section 2.7.5. The permittee shall use the format devised by ADEQ.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter “not required” on the form, include an explanation, and submit the form to ADEQ.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:

a. Table 8: ROUTINE DISCHARGE MONITORING

b. Table 9: GROUNDWATER MONITORING

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

2.7.2. Operation Inspection / Log Book Recordkeeping

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

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

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify ADEQ per Section 2.7.5 within five (5) days (except as provided in Section 2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges) of becoming aware of an AL exceedance, or violation of any permit condition, AQL, or DL for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
2. The permittee shall submit a written report to ADEQ per Section 2.7.5 within thirty (30) days of becoming aware of the violation of any permit condition, AQL, or DL. The report shall document all of the following:
    a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
    b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
    c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
    d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
    e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
    f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2 Operation Inspection / Log Book Recordkeeping.

2.7.4.1. Well Installation Reports

A well installation report shall be submitted to ADEQ within ninety (90) days after the completion of new well installations in accordance with Section 2.5.4. Each well installation report shall be completed in accordance with A.A.C. R12-15-801 et seq. and consist of the following:

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

2.7.5. Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: https://www.azdeq.gov/mydeq. Contact at 602-771-4571 for any inquiry related to the SMRFs.

5-day and 30-day contingency notification and reports, laboratory reports, and verification sampling results required by this permit should be submitted through the myDEQ portal accessible on the ADEQ website at: https://www.azdeq.gov/mydeq.

If the required reports cannot be submitted, or require further documentation that cannot be submitted on the myDEQ portal, then submit items to APPContingencyreports@azdeq.gov or the address listed below:

The Arizona Department of Environmental Quality
Individual Aquifer Protection Program (APP) - Water Reuse & Reclamation Unit
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6. Reporting Deadline

The following table lists the quarterly report due dates:

Table 5: QUARTERLY REPORTING DEADLINES	
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 if applicable:

Table 6: (SEMI-)ANNUAL REPORTING DEADLINES	
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 and Section 2.0

ADEQ shall be notified per 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, Certified Operator in Direct Responsible Charge 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 ADEQ per Section 2.7.5 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.
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. Following ADEQ approval, the permittee shall promptly 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 ADEQ 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 ADEQ per Section 2.7.5 of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report “closure in process” in the comment section.

2.9.1. Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to ADEQ per Section 2.7.5, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the results of the implemented closure plan achieve clean-closure, ADEQ will 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 ADEQ per Section 2.7.5 indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

1. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with the AWQS at the applicable POC or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
3. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(36) and § 49-2(3);
4. Further action is necessary to meet property use restrictions;
5. SMRF submittals are 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 ADEQ.

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

2.10.1. Post-Closure Plan

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

2.10.2. Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE

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

Unless otherwise indicated, for each compliance schedule item listed below, the permittee shall submit the required information to ADEQ per Section 2.7.5.

NOTE: Arizona law requires that engineering and geological documents such as cost estimates, drawings, specifications, maps, plans, and reports be signed and sealed by an Arizona registered professional engineer or an Arizona registered geologist, pursuant to the Arizona Board of Technical Registration statutes, unless a statutory exclusion or exemption applies. See A.R.S. § 32-101 to -152; A.A.C. R4-30-101 to -306.

Table 7: COMPLIANCE SCHEDULE ITEMS

No.	Description	Due By:	Permit Amendment Required?
1.	The permittee shall submit signed, dated, and sealed as-built drawings that confirm that the recharge basin RB-304 was 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.	No
2.	The permittee shall submit quarterly water level data for monitor wells WR-122A (55-518603) and WR-126A (ILF) (55-515094) on a quarterly basis.	Within 60 days of the end of each quarter through 2027	No
3.	The permittee shall submit the Remedial Action Plan prepared for the Harrison Road Landfill, prepared by City of Tucson Environmental Services	Upon completion of the RAP	No
4.	The permittee shall submit a formal technical evaluation of VOC mobilization potential within the vadose zone, specifically tailored to the HRL location, including a plume exacerbation analysis and mitigation measures to prevent unreasonable harm.	Within 90 days of HRL RAP completion.	No
5.	The permittee shall update the facility Contingency Plan to establish operational responses for Alert Levels at monitoring points WR-122A (2,632 ft amsl) and WR-126A (2,690 ft amsl).	Within 120 days of permit issuance.	No
6.	Tucson Water will update internal O&M Manual with new basin, RB-304, information.	Within 90 days of the approval to discharge at RB-304	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 8: ROUTINE DISCHARGE MONITORING					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
1	Flow meter station			32° 08' 46.35"	110° 46' 51.95"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Flow[1]: Daily[2]	Not Established[3]	Not Established	AC/FT[4]	Daily	Quarterly
Total Flow: Annual Discharge[5]	Not Established	8,000	AC/FT	Annually	Annually
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
2	Sampling Point 522 The entry point of reclaimed water into the distribution system			32° 17' 6.4"	111° 01' 35.45"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
E. coli: Single sample maximum	Not Applicable	15	MPN[6]	Daily[7]	Quarterly
E. coli: four (4) of seven (7) samples in a week[8]	Not Applicable	Non-detect[9]	MPN	Weekly Evaluation	Quarterly
Total Nitrogen[10] :Five-sample rolling geometric mean[11]	8.0	10	mg/l[12]	Monthly Calculation	Quarterly
Nitrate-Nitrite as N	8.0	10.0	mg/l	Monthly	Quarterly
Nitrate as N	8.0	10.0	mg/l	Monthly	Quarterly
Nitrite as N	0.8	1.0	mg/l	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	Not Established	Not Established	mg/l	Monthly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly

[1] Total flow is the total of flows to the Recharge Basins
[2] Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily
[3] Not Established = Monitoring is required but no limits have been specified
[4] AC/FT = Acre-feet
[5] Annual Average means the sum of monthly average discharge volumes over 12 months
[6] MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect
[7] 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
[8] Week means a seven-day period starting on Sunday and ending on the following Saturday. The reporting form for this parameter consists of 13 weeks per quarter
[9] For *E. coli* 4 of 7 samples requires entering "Compliance" or "Non-compliance" on the SMRF for each week of the reporting period. Evaluate the daily fecal coliform results for that week (Sunday through Saturday). If, of these seven days, four or more of the daily *E. coli* results are non-detect, report "Compliance" for that week's entry on the SMRF. If three or fewer of the daily *E. coli* results are non-detect, report "Non-compliance" for that week's entry on the SMRF
[10] Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[11] The five-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together then taking the fifth root of the product. *Example:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$
[12] mg/l = milligrams per liter

Table 8: ROUTINE DISCHARGE MONITORING (Continued)					
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
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
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

Table 8: ROUTINE DISCHARGE MONITORING (Continued)					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
3	TR-054T Entry point of TARP water into the Reclaimed Water System following chlorine disinfection			31° 10' 06"	111° 59' 20"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Flow[13]: Daily[14]	Not Established	Not Established	AC/FT	Daily	Quarterly
Total Flow Annual Discharge[15]	Not Established	Not Established	AC/FT	Annually	Annually
E. coli	Not Established	15.0	MPN[16]	Semi-Annually	Semi-Annually
Nitrate-Nitrite as N	8.0	10.0	mg/l	Semi-Annually	Semi-Annually
Nitrate as N	8.0	10.0	mg/l	Semi-Annually	Semi-Annually
Nitrite as N	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Total Kjeldahl Nitrogen (TKN)	Not Established[17]	Not Established	mg/l	Semi-Annually	Semi-Annually
Fluoride	3.2	4.0	mg/l	Semi-Annually	Semi-Annually
Cyanide (as free cyanide)	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
Metals (Total)					
Antimony	0.0048	0.006	mg/l	Semi-Annually	Semi-Annually
Arsenic	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Barium	1.60	2.00	mg/l	Semi-Annually	Semi-Annually
Beryllium	0.0032	0.004	mg/l	Semi-Annually	Semi-Annually
Cadmium	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Chromium	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Lead	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Mercury	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Nickel	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Selenium	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Thallium	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually

[13] Total flow is the total of flows from the TARP facility entering the Reclaimed Water System
[14] Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily
[15] Annual Average means the sum of monthly average discharge volumes over 12 months
[16] MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect
[17] Not Established means monitoring is required, but no limits are specified.

Table 8: ROUTINE DISCHARGE MONITORING (Continued)					
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.20	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

Table 9: GROUNDWATER MONITORING					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
4	POC-1A Well WR-705A[18]			32° 08′ 50.79″	110° 47′ 07.01″
5	POC-1B Well WR-705B			32° 08′ 50.93″	110° 47′ 06.57″
6	POC-2A Well WR-706A[19]			32° 08′ 44.91″	110° 46′ 47.94″
7	POC-2B Well WR-706B			32° 08′ 45.25″	110° 46′ 48.00″
Parameter	**Alert Level**	**Aquifer Quality Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Nitrate and Nitrite as N	8.0	10	mg/l	Quarterly	Quarterly
Nitrate as N	8.0	10	mg/l	Quarterly	Quarterly
Nitrite as N	0.8	1	mg/l	Quarterly	Quarterly
E. coli	Not Applicable	Absence[20]	MPN	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	Mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Water Level POC Well No. 1A	320 – 405	Not Applicable	Feet bls[21]	Quarterly	Quarterly
Water Level POC Well No. 1B	210 – 330[22]	Not Applicable	Feet bls	Quarterly	Quarterly
Water Level POC Well No. 2A	310 – 395	Not Applicable	Feet bls	Quarterly	Quarterly
Water Level POC Well No. 2B	200 - 320[23]	Not Applicable	Feet bls	Quarterly	Quarterly
Metals (Dissolved)					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.6	2	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
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

[18] Contingency monitoring and reporting for POC-1A only required if WL for POC-1B exceeds WL >320 ft bls
[19] Contingency monitoring and reporting for POC-2A only required if WL for POC-2B exceeds WL >310 ft bls.
[20] Absence means <2.2 MPN per 100 ml
[21] Feet bgs = feet below ground surface
[22] If the WL does not fall within the allowable range, see Section 2.6.2.3.4 for SMRF reporting guidelines
[23] If the WL does not fall within the allowable range, see Section 2.6.2.3.4 for SMRF reporting guidelines

Table 9: GROUNDWATER MONITORING (Continued)					
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Annually	Annually
Carbon tetrachloride	0.004	0.005	mg/l	Annually	Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Annually	Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Annually	Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Annually	Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Annually	Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Annually	Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Annually	Annually
Dichloromethane	0.004	0.005	mg/l	Annually	Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Annually	Annually
Ethylbenzene	0.56	0.7	mg/l	Annually	Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Annually	Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Annually	Annually
Monochlorobenzene	0.08	0.1	mg/l	Annually	Annually
Styrene	0.08	0.1	mg/l	Annually	Annually
Tetrachloroethylene	0.004	0.005	mg/l	Annually	Annually
Toluene	0.8	1	mg/l	Annually	Annually
Trihalomethanes (total)	0.08	0.10	mg/l	Annually	Annually
1,1,1-Trichloroethane	0.16	0.20	mg/l	Annually	Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Annually	Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Annually	Annually
Trichloroethylene	0.004	0.005	mg/l	Annually	Annually
Vinyl Chloride	0.0016	0.002	mg/l	Annually	Annually
Xylenes (Total)	8	10	mg/l	Annually	Annually

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
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 exceedances, identify which structure exceeds the performance level in the log book.			
Pollution Control Structure/Parameter	**Performance Level**	**Inspection Frequency**	**Reporting Frequency**
Basin 301 Freeboard[24]	3.6 Linear Feet	Weekly	See Section 2.7.3
Basin 302 Freeboard	4.5 Linear Feet	Weekly	
Basin 303 Freeboard	4.5 Linear Feet	Weekly	
Basin 304 Freeboard	4.5 Linear Feet	Weekly	
Recharge Basins	No visible structural damage, breach, or erosion of embankments	Weekly	
Flowmeter	Good working condition	Weekly	
Surface Impoundment Vegetation Removal	Maintain a procedure to control excessive vegetation that may impact the integrity of the impoundment or inhibit access	Monthly	
POC Wells	Well cap and seals are intact. No discernable corrosion or deterioration of the well(s). No discernable materials accumulating in the well. Any dedicated well equipment is functional and intact.	Monthly	See Sections 2.7.3 and 2.5.5.1

[24] Freeboard is measured from the surface top linearly towards the bottom into each individual basin.

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 ADEQ:

APP Application, dated:	07/15/2025
Contingency Plan, date and name:	04/01/2025, Volume II – APP Application, Attachment D, Contingency and Emergency Response Plan

6.0 NOTIFICATION PROVISIONS

6.1. 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.

6.2. 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.

6.3. Compliance with Aquifer Water Quality Standards

[A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an Aquifer Water Quality Standard (AWQS) at the applicable point of compliance 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 POC for the facility, the water quality of any aquifer for that pollutant.

6.4. 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, pursuant to A.A.C. R18-9-A203(C), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.5. 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.

6.6. 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.

6.7. Duty to Modify

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for a permit amendment prior to making changes to the design or operational practices authorized by this permit.

6.8. 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 ADEQ. The permittee shall notify ADEQ 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 ADEQ. 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).