

STATE OF ARIZONA  
AQUIFER PROTECTION PERMIT NO. P-100310  
PLACE ID 815, LTF 93045  
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 Liberty Utilities (Litchfield Park Water & Sewer) Corporation to operate the Palm Valley Water Reclamation Facility located at 14222 W. McDowell Road, Goodyear, Arizona, in Maricopa County, over groundwater of the Phoenix 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:** Palm Valley Water Reclamation Facility (WRF)  
**Facility Address:** 14222 West McDowell Road  
Goodyear, Arizona, 85395  
**County:** Maricopa  
**Permitted Flow Rate:** 7,470,000 gallons per day (gpd)  
**Permittee:** Liberty Utilities (Litchfield Park Water & Sewer) Corporation  
**Permittee Address:** 14920 W. Camelback Rd.  
Litchfield Park, AZ 85340  
**Facility Contact:** Manager SCADA Quantum SCADA Manager  
**Emergency Phone No.:** (623) 337 - 2210 (623) 298 - 4821 (480) 669 - 7124  
**Latitude/Longitude:** 33° 27' 55" N/ 112° 21' 55" W  
**Legal Description:** Township 02 S, Range 01 W, Section 33, SE¼, SW¼, SW¼ 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 \_\_\_\_\_, 2023

**THIS AMENDED PERMIT SUPERSEDES ALL PREVIOUS PERMITS**

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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), and A.A.C. R18-5-114]

The permittee is authorized to operate the Palm Valley WRF, with a maximum average monthly flow of 6.9 mgd for Stage 1 Modifications and 7.17 and 7.47 mgd for Stage 2 Temporary Modifications. The Department has graded this facility as a Grade 4 wastewater treatment plant. The facility shall have an operator in direct responsible charge who is certified for the grade of the facility and inspects it daily.

#### **Palm Valley WRF Stage 1 WRF (6.9 MGD)**

The treatment process consists of a headworks that includes an influent pump station (IPS) with four 4,150-gpm pumps (3 duty; 1 standby) that pump into a common header that feeds three 7.9 mgd ¼-inch reciprocating influent screens (2 duty; 1 standby) with a washer compactor, then two vortex grit chambers (11.0 mgd and 7.0 mgd) with a grit classifier and washer. The screens and grit process can be bypassed directly into the Sequencing Batch Reactor (SBR) basins. Preliminary treated effluent flows to a 760,000 gallon influent equalization (EQ) basin, equipped with three (2 duty; 1 standby) VFD operated 5,500-gpm SBR feed pumps.

From the EQ basin, flow is pumped to an influent manifold that distributes the influent to the bottom of four Sequencing Batch Reactors (SBR 1, SBR 2, SBR 3, and SBR 4) basins with jet aeration, motive pumps, and decanters. SBR Basins 1 and 2 has five 1,600-cfm blowers, two dedicated to each SBR and one common redundant blower, and four 5,900-gpm motive pumps in each basin. SBR basins 3 and 4 has five 1,800-cfm blowers, two dedicated to each SBR and one common redundant blower, and two 7,300-gpm motive pumps in each basin. SBR 1 and 2 each have a 1,000-gpm WAS pump in the pump gallery, and SBR 3 and 4 each have a 1,300-gpm WAS pump in each basin. WAS is pumped to one of four sludge holding tanks. Sludge Holding Tanks 1-3 have perforated membrane tube diffusers, while Sludge Holding Tank 4 has jet aeration, because it was converted from an SBR.

Secondary effluent is decanted from the SBRs into a header that sends it to two surge tanks equipped with three pumps (5,700-gpm, 5,700-gpm, and 1,400-gpm) to attenuate the flow before it is pumped into five 2.0-mgd disk filters (4 duty; 1 standby), each equipped with 8 disks. A clearwell with four 2,000-gpm turbine pumps receives effluent from the disk filters and pumps it through the UV disinfection system with three 5-mgd UV trains (2 duty; 1 standby) with 2 UV reactors in series (eight lamps each) per train. The WRF is designed to produce Reclaimed Water Reuse Class A+ effluent. Prior to entering the reclaimed water distribution system, the permittee may inject sodium hypochlorite to help prevent microbial growth in the surge tanks, clearwell, disk filters, and reclaimed water distribution system.

The effluent from the WRF may be discharged to recharge at the Sustainable Effluent Aquifer Project (SEAP: APP No. 514107) located three miles north of the WRF, the Roosevelt Irrigation District (RID) canal under a valid AZPDES permit (AZ0025712), and/or reused for any allowable use under a valid reclaimed water permit. An interconnection between the Palm Valley (which includes the Sarival WRF APP No. 513981) reclaimed water distribution system and the City of Goodyear 157th Avenue WRF (APP No. 101324) reclaimed water distribution system allows reclaimed water to flow either way between the systems. Discharges to the RID canal are exempt from APP requirements pursuant to A.R.S. § 49-250(B)(6) and (16).

The Stage 1 Modifications included SCADA modifications to revise the program command for the fill setpoint and increase the total depth by 1 foot. This decreased the freeboard from 3-feet to 2-feet, increased the decant flow by 12,000 gallons, and increased the combined treatment capacity of the SBRs by 0.35 mgd.

**Palm Valley WRF Stage 2A Temporary Modifications (7.17 MGD)**

The Stage 2A Temporary Modifications include conversion of SBR Basin 1 to a Flow Through Reactor (FTR) basin that will remove the decant, settle, and idle phases and add clarifiers to perform these processes. This includes, adding a duplex skid-mounted pump system with two 3,000 gpm mixed liquor pumps, and six 10-ft x 47-ft x 10-ft temporary frac tanks (5 duty; 1 standby) with clarifier inserts that are ‘dropped in’ for a clarification capacity of 0.432 mgd for each frac tank. RAS will be sent from the six clarifiers to the beginning of FTR 1, or wasted to the sludge holding tanks. Effluent will be sent to the clear well. A spare clearwell pump will be purchased and remain near the clearwell, to meet redundancy requirements for the temporary modifications. RAS will be sent from the six clarifiers to the beginning of FTR 1 basin, so that it does not enter SBR 2, 3, or 4, and the WAS will be sent to the sludge holding tanks for further processing. The temporary clarifiers do not provide scum removal, therefore daily maintenance will include scum removal from a combination vacuum truck, or other method to get scum back to the sludge holding tanks or disposed of at a landfill. SBR 2, 3, and 4 will continue to operate with the Stage 1 Modifications.

**Palm Valley WRF Stage 2B Temporary Modifications (7.47 MGD)**

The Stage 2B Temporary Modifications include the modifications made in the Stage 2A Temporary Modifications, and conversion of SBR Basin 2 to an FTR basin, so that both SBR 1 and SBR 2 have been converted to FTR basins (FTR 1 and FTR 2). Five more temporary frac tanks (for a total of 10 duty; 1 standby) with clarifier modifications will be added to the facility. RAS will be sent from the 11 clarifiers to the beginning of the FTBs so that it does not enter SBR 3 or 4, and the WAS will be sent to the sludge holding tanks for further processing. SBR 3, and SBR 4 will continue to operate with the Stage 1 Modifications.

When the Sarival WRF (permitted for 4.4 MGD) comes online and starts treating wastewater, currently treated by the Palm Valley WRF, the Stage 2 Temporary Modifications will be discontinued, and the Stage 1 improvements will remain in operation. The permitted capacity will revert back to 6.9 MGD.

All the sludge, including screenings, grit, and scum, shall be hauled to landfill for disposal in accordance with State and Federal regulations.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES		
Facility	Latitude (North)	Longitude (West)
Palm Valley Water Reclamation Facility	33° 27' 55" N	112° 21' 55" W

**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 A.A.C. R18-14-104(A), Table 2. Send all correspondence requesting reduced fees to the Groundwater Protection and Reuse Section. 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 \$1,236,163.25. The financial capability was demonstrated through a Letter of Credit A.A.C. R18-9-A203(C)(5).

**2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)**

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

The treatment facility 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 Stage 1 and Stage 2 Temporary improvements were designed as per the design report signed, dated, and sealed by Steven John Wedwick, P.E (Civil #35182) with NCS Engineers on March 3, 2023, and any subsequent submittals. As part of these improvements, the SEAP was moved to its own APP No. 514107 at ADEQ's request, since the SEAP is three miles from the treatment works.

The expansion of the WRF was designed and constructed per the design report and plans signed, dated, and sealed on November 2014, by Tim Leclair, P.E. (Civil #43824), with Amec Environmental & Infrastructure, Inc., and subsequent sealed submittals that served as additions to the design report.

**2.2.2. Site-Specific Characteristics**

Due to location in a neighborhood, full noise, odor, and aesthetic controls are required for this facility.

**2.2.3. Pre-Operational Requirements**

Prior to operating SBR1 as FTR Basin 1, operating the six frac tank clarifiers and RAS system, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per the compliance schedule in Section 3.0. The certificate shall be submitted to the Groundwater Protection and Reuse Section.

Prior to operating SBR 2 as FTR Basin 2, and operating the additional 5 clarifiers, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per the compliance schedule in Section 3.0. The certificate shall be submitted to the Groundwater Protection and Reuse Section.

**2.2.4. Operational Requirements**

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the treatment facility site at all times; the manual shall be available upon request during inspections by ADEQ personnel. This manual shall include an updated addendum for Stage 2A/2B Temporary Modifications.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING

**2.2.5. Reclaimed Water Classification**

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

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

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

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

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

**2.3. DISCHARGE LIMITATIONS**

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

1. The permittee is authorized to operate the treatment facility with a maximum average monthly flow of 6.9 million gallons per day (mgd) for Stage 1 Modifications, 7.17 for Stage 2A Temporary Modifications and 7.47 mgd for Stage 2B Temporary Modifications.
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, Table 9: 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(S) OF COMPLIANCE			
POC #	POC Location	Latitude (North)	Longitude (West)
MW-1 (Conceptual)	Northwest corner of the WRF	33° 27' 57.2"	112° 21' 57.0"
MW-2 (Conceptual)	Southeast corner of the WRF	33° 27' 53.9"	112° 21' 50.8"

Groundwater monitoring is not required at the conceptual points of compliance, except as a contingency action at the WRF. MW-1 and MW-2 were switched to conceptual POC wells in 2020 during an APP amendment (LTF No.73291). The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring at the POC, or to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

The depth to groundwater beneath the WRF is approximately 120 feet below land surface and the principal direction of groundwater flow is towards the northwest.

**2.5. MONITORING REQUIREMENTS**

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

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

**2.5.1. Pre-Operational Monitoring**

Not Applicable

### **2.5.2. Routine Discharge Monitoring**

The permittee shall monitor the effluent according to Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING. Representative samples of the effluent shall be collected at the point of discharge from the effluent pump station.

### **2.5.3. Reclaimed Water Monitoring**

The permittee shall monitor the reclaimed water according to the Class A+ Reclaimed Water Monitoring Table in Section 4.2, Table 10: RECLAIMED WATER MONITORING in addition to the routine discharge monitoring parameters listed in Table 9: ROUTINE DISCHARGE MONITORING. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent pump station.

### **2.5.4. Facility / Operational Monitoring**

Operational monitoring inspections shall be conducted according to Section 4.2, Table 11: 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**

Groundwater Monitoring is not required.

#### **2.5.5.1. POC Well Replacement**

Groundwater monitoring is not required at the conceptual points of compliance, except as a contingency action at the WRF. The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring.

### **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 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 the Groundwater Protection and Reuse Section for approval prior to installation and the permit shall be amended to include any new monitoring points.

## **2.6. CONTINGENCY PLAN REQUIREMENTS**

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

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

At least one copy of this permit and the approved contingency and emergency response plan submitted in the application and 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 be aware of and follow the contingency and emergency plans. This emergency plan shall include the addendum for the Stage 2A/2B Temporary Modifications that includes reporting and responding to events caused by the temporary facilities.

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

For freeboard performance levels, the permittee shall comply with the requirements as specified in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING to prevent the overtopping of a tanks. If a tank is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.

If a performance level set in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

1. Notify the Groundwater Protection and Reuse Section within five (5) days of becoming aware of the exceedance per Section 2.7.5.
2. Submit a written report to the Groundwater Protection and Reuse Section 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 9: ROUTINE DISCHARGE MONITORING 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 (30) days of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Protection and Reuse Section 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, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

**2.6.2.2.1. Exceeding Permit Flow Limit**

1. If the AL for average monthly flow in Section 4.2, Table 6: ROUTINE FLOW MONITORING: 6.90 mgd has been exceeded and the Sarival WRF (APP No. 583981) has not been commissioned, the permittee shall begin construction of the expansion to monitor under Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd, or submit a report to the ADEQ Groundwater Protection and Reuse Section detailing the reasons it is not necessary to begin the next phase of construction. Acceptance of the report instead of beginning the next phase of construction requires ADEQ approval. After the Sarival WRF has come online, this phase is no longer valid, ADEQ shall be notified, and monitoring shall continue under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd.
2. If the AL for average monthly flow in Section 4.2, Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd has been exceeded and the Sarival WRF (APP No. 583981) has not been commissioned, the permittee shall begin construction of the expansion to monitor under Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd, or submit a report to the ADEQ Groundwater Protection and Reuse Section detailing the reasons it is not necessary to begin the next phase of construction.

Acceptance of the report instead of beginning the next phase of construction requires ADEQ approval. After the Sarival WRF has come online, this phase is no longer valid, ADEQ shall be notified, and monitoring shall continue under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd.

3. If the AL for average monthly flow in Section 4.2, Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd has been exceeded, the permittee shall submit an application to the Groundwater Protection and Reuse Section for an APP amendment to expand the WRF, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for expansion requires ADEQ approval.
4. After the Sarival WRF has come online, if the AL for average monthly flow in Section 4.2, Table 6: ROUTINE FLOW MONITORING: 6.90 mgd has been exceeded, the permittee shall submit an application to the Groundwater Protection and Reuse Section for a permit amendment to expand the treatment facility, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for amendment requires ADEQ approval. After the Sarival WRF has come online, this permit shall be amended to remove the temporary improvements in accordance with Section 3.0 Compliance Schedule.

#### **2.6.2.3. Exceeding of Alert Levels in Groundwater Monitoring**

##### **2.6.2.3.1. Alert Levels for Indicator Parameters**

Not applicable - groundwater monitoring is not required under this permit.

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

Not applicable - groundwater monitoring is not required under this permit.

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

Not applicable - groundwater monitoring is not required under this permit.

##### **2.6.2.3.4. Alert Level for Groundwater Level**

Not applicable - groundwater monitoring is not required under this permit

#### **2.6.3. Discharge Limit Violation**

1. If a DL set in Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING or Table 10: RECLAIMED WATER MONITORING 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 and Reuse Section according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, notification of downstream or downgradient users who may be directly affected by the

discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

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

#### **2.6.4. Aquifer Quality Limit Violation**

Not applicable - groundwater monitoring is not required under this permit.

#### **2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges**

[A.R.S. § 49-201(12) AND PURSUANT TO A.R.S. § 49-241]

##### **2.6.5.1. Duty to Respond**

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

##### **2.6.5.2. Discharge of Hazardous Substances or Toxic Pollutants**

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

##### **2.6.5.3. Discharge of Non-Hazardous Materials**

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Groundwater Protection and Reuse Section within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AWQS exceedance, or could pose an endangerment to public health or the environment.

##### **2.6.5.4. Reporting Requirements**

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Groundwater Protection and Reuse Section 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. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

### **2.6.6. Corrective Actions**

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection and Reuse Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, 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, the operator shall submit to the Groundwater Protection and Reuse Section 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 the Groundwater Protection and Reuse Section.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
  - a. Table 6: ROUTINE FLOW MONITORING: 6.90 mgd
  - b. Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd
  - c. Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd
  - d. Table 9: ROUTINE DISCHARGE MONITORING
  - e. Table 10: RECLAIMED WATER 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 immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time; and
6. Any other information required by this permit to be entered in the log book.
7. Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).
8. Daily operator in direct responsible charge site visit sign-in to comply with R18-5-104.

### **2.7.3. Permit Violation and Alert Level Status Reporting**

1. The permittee shall notify the Groundwater Protection and Reuse Section per Section 2.7.5 within five (5) days (except as provided in Section 2.6.5) of becoming aware of an AL exceedance, or violation of any permit condition, 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 the Groundwater Protection and Reuse Section per Section 2.7.5 within thirty (30) days of becoming aware of the violation of any permit condition, 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 11: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2, and report to the Groundwater Protection and Reuse Section any violations or exceedances as per Section 2.7.3.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results and flow volumes to any of the following in accordance with A.A.C. R18-9-B701(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 Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: <http://www.azdeq.gov/welcome-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: <http://www.azdeq.gov/welcome-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](mailto:APPContingencyreports@azdeq.gov) or the address listed below:

The Arizona Department of Environmental Quality  
Groundwater Protection and Reuse Section  
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 3: 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 4: (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**

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

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

## **2.9. Closure**

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

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection and Reuse Section 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 the Groundwater Protection and Reuse Section 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 closure plan achieves clean-closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.



### **2.9.2. Closure Completion**

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Protection and Reuse Section 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:

3. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
4. 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;
5. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(36) and Title 49, Chapter 2, Article 3;
6. Further action is necessary to meet property use restrictions.
7. 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 the Groundwater Protection and Reuse Section.

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

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

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

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

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE

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

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

Table 5: COMPLIANCE SCHEDULE ITEMS			
No.	Description	Due By:	Permit Amendment Required?
<b>Completion of Construction for Treatment Facilities</b>			
1	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2A Temporary Modifications" as described in Section 2.1 are complete according to the according to the Department-approved design report or plans and specifications, as applicable. The permittee shall ensure that the financial assurance mechanism has been updated to cover Phase 2, prior to ADEQ approval.	Within 90 days of completion of construction the Stage 2A Improvements.	No
2	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2B Temporary Modifications" as described in Section 2.1 are complete according to the according to the Department-approved design report or plans and specifications, as applicable.	Within 90 days of completion of construction the Stage 2B Improvements.	No
<b>Transition back to Table 6: ROUTINE FLOW MONITORING: 6.90 mgd</b>			
3	The permittee shall notify ADEQ when the "Sarival WRF" will be constructed and started operation, in order to return to monitoring under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd and decommission the "Stage 2A/2B Temporary Improvements" and return FTR Basin 1 and 2 to SBR Basin 1 and 2.	Within ninety (90) days of the Sarival WRF commencing operation and within two (2) years of permit issuance	No
4	The permittee shall submit an APP "Other Amendment" application to remove the Stage 2A/2B Temporary Improvements from the permit. An Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2B Temporary Modifications" as described in Section 2.1 have been removed from the site and the site has been restored according to the according to the Department-approved design report or plans and specifications, as applicable shall accompany the amendment application.	Within one (1) year of the Sarival WRF commencing operation	Yes

**3.0 Compliance Schedule (Continued)**

<b>Financial Assurance Mechanism</b>			
5	The permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.13, below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs and discharging facilities have not been added. The demonstration shall also include information in support of a Letter of Credit as required in A.A.C. R18-9-A203(C)(5).	On or before July 1, 2029 and every 6 years for the duration of the permit.	No
6	The permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a, and an updated financial assurance demonstration for the updated cost estimate as per A.A.C. R18-9-A203.	On or before July 1, 2029 and every 6 years for the duration of the permit.	Yes

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**4.0 TABLES OF MONITORING REQUIREMENTS**

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

Not applicable.

**4.2. COMPLIANCE OR OPERATIONAL MONITORING**

Table 6: ROUTINE FLOW MONITORING: 6.90 mgd <sup>1</sup>					
Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
1 – Effluent Flow Meter <sup>2</sup>	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Effluent Flow <sup>3</sup> : Daily <sup>4</sup>	Not Applicable <sup>5</sup>	Not Applicable	mgd <sup>6</sup>	Daily	Quarterly
Total Effluent Flow: Monthly Average <sup>7</sup>	6.21	6.90	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd <sup>8</sup>					
Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
1 – Effluent Flow Meter <sup>2</sup>	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Effluent Flow <sup>3</sup> : Daily <sup>4</sup>	Not Applicable <sup>5</sup>	Not Applicable	mgd <sup>6</sup>	Daily	Quarterly
Total Effluent Flow: Monthly Average <sup>7</sup>	6.45	7.17	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

<sup>1</sup> The monitoring under this table shall be continued until CSI No. 1 for “Stage 2A Temporary Modifications” has been accepted by the Department and shall be discontinued and the monitoring under Table 7 shall commence upon operation of the Stage 2A Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to this table.

<sup>2</sup> All wastewater flow measurement devices must be calibrated prior to the first year of reporting and recalibrated either biennially (every 2 years) or at the minimum frequency specified by the manufacturer. Wastewater flow measurement devices must be calibrated using the procedures specified by the device manufacturer.

<sup>3</sup> Total flow for all methods of disposal.

<sup>4</sup> Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.

<sup>5</sup> Not Applicable means that monitoring is required, but no limits have been specified at the time of permit issuance.

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

<sup>7</sup> Monthly Average means the calculated average of daily flow values in a month.

<sup>8</sup> The monitoring under this table shall be continued until CSI No. 2 for “Stage 2B Temporary Modifications” has been accepted by the Department and shall be discontinued and the monitoring under Table 8 shall commence upon operation of the Stage 2B Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to Table 6.

Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd <sup>9</sup>					
Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
1 – Effluent Flow Meter <sup>2</sup>	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Effluent Flow <sup>3</sup> : Daily <sup>4</sup>	Not Applicable <sup>5</sup>	Not Applicable	mgd <sup>6</sup>	Daily	Quarterly
Total Effluent Flow: Monthly Average <sup>7</sup>	6.72	7.47	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

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<sup>9</sup> The monitoring under this table shall not be commenced until CSI No. 2 has been accepted by the Department for Stage 2B Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to Table 6.

Table 9: ROUTINE DISCHARGE MONITORING<sup>10</sup>

Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
2 – Treated Effluent	After UV system			33° 27' 55.1"	112° 21' 56.7"
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single sample maximum	Not Applicable	23.0	MPN <sup>11</sup>	Daily <sup>12</sup>	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week <sup>13</sup>	Not Applicable	Non-detect <sup>14</sup>	MPN	Weekly Evaluation	Quarterly
Total Nitrogen <sup>15</sup> :Five-sample rolling geometric mean <sup>16</sup>	8	10	mg/l <sup>17</sup>	Monthly Calculation	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
<b>Metals (Total)</b>					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

<sup>10</sup> Routine Discharge Monitoring for this table shall be conducted for all Phases/Stages included in the permit.

<sup>11</sup> MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.

<sup>12</sup> For fecal coliform, “Daily” sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four samples in each week are obtained and analyzed.

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

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

<sup>15</sup> Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen.

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

<sup>17</sup> mg/l = milligrams per liter.

Table 9: ROUTINE DISCHARGE MONITORING (Continued)

Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
2 – Treated Effluent	After UV system			33° 27' 55.1"	112° 21' 56.7"
Parameter	Alert Level	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
<b>Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)</b>					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) <sup>18</sup>	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

<sup>18</sup> Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane

Table 10: RECLAIMED WATER MONITORING				
Reclaimed water monitoring under Table 10: RECLAIMED WATER MONITORING shall be performed in addition to routine discharge monitoring required under Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING				
Sampling Point Number	Sampling Point Identification		Latitude (North)	Longitude (West)
2 – Treated Effluent	After UV system		33° 27' 55.1"	112° 21' 56.7"
Parameter	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform Single-sample maximum:	23.0	MPN <sup>11</sup>	Daily <sup>12</sup>	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	Non-detect <sup>19</sup>	MPN	Daily Evaluation	Quarterly
Total Nitrogen <sup>15</sup> : Five-sample rolling geometric mean <sup>16</sup>	10	mg/l <sup>17</sup>	Monthly Calculation	Quarterly
Turbidity <sup>20</sup> : Single reading	5.0	NTU <sup>21</sup>	Daily <sup>22</sup>	Quarterly
Turbidity: 24-hour average	2.0	NTU	Daily Calculation	Quarterly
Enteric Virus <sup>23</sup> : Four (4) of last seven (7) samples	Non-detect	MPN <sup>11</sup>	Monthly / Suspended <sup>24</sup>	Quarterly

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

<sup>20</sup> Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF; occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance.

<sup>21</sup> NTU = Nephelometric Turbidity Units

<sup>22</sup> For the single turbidity reading, daily means the maximum reading during the 24-hour period.

<sup>23</sup> Initial monthly enteric virus sampling shall be performed to indicate four (4) out of seven (7) sample results of non-detect.

<sup>24</sup> Enteric virus sampling shall resume only when the discharge limit for the 24-hour average for turbidity is exceeded for two (2) consecutive 24-hour monitoring periods. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter “suspended” in the appropriate space on the SMRF



Table 11: 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 exceedance, identify which structure exceeds the performance level in the log book.			
Pollution Control Structure/Parameter	Performance Level	Inspection Frequency	Reporting Frequency
Pump Integrity	Good working condition	Daily	See Section 2.7.3
Treatment Plant Components	Good working condition	Daily	
Basin (SBR and FTR) Tank Freeboard	One (1) Linear Foot	Daily	
Sludge Holding Tanks Freeboard	One (1) Linear Foot	Daily	
Chlorine Residual prior to entry into reclaimed water distribution system	No greater than 4 mg/L	Daily	
Headworks and Solids Handling Ionization Odor Control Systems	Good working condition	Quarterly	
Chemical Wet Scrubber Odor Control Units	Good working condition H <sub>2</sub> S and flow	Quarterly	
Activated Carbon systems	Good working condition H <sub>2</sub> S and flow	Quarterly	
<b>Stage 2A/2B Temporary Modifications</b>			
MLSS Pumps and piping to Frac Tanks	No leaks and in good working order	Daily	See Section 2.7.3
FTR Frac Tank Clarifiers Scum	Scum removed from top of tanks	Daily	
Frac Tank Clarifiers Freeboard	One (1) Linear Foot	Daily	
Piping from Frac Tanks to FTR basins	No leaks and in good working order	Daily	

**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:

- APP Application, dated: December 16, 2022; [Design Report Resubmittal 03/03/2023]
- Updated closing costs July 14, 2023
- Contingency Plan, dated: November 7, 2022 [Stage 2 Modifications Addendum is necessary]

## **6.0 NOTIFICATION PROVISIONS**

### **6.1. Annual Registration Fees**

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

### **6.2. Duty to Comply**

[A.R.S. §§ 49-221 through 263]

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

### **6.3. Duty to Provide Information**

[A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

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

### **6.4. Compliance with Aquifer Water Quality Standards**

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

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

### **6.5. Technical and Financial Capability**

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

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

### **6.6. Reporting of Bankruptcy or Environmental Enforcement**

[A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. the filing of bankruptcy by the permittee; or
2. the entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

### **6.7. Monitoring and Records**

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

**6.8. Inspection and Entry**

[A.R.S. §§ 49-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

**6.9. Duty to Modify**

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

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

**6.10. Permit Action: Amendment, Transfer, Suspension, and Revocation**

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

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Protection and Reuse 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).