

STATE OF ARIZONA AQUIFER PROTECTION PERMIT NO. P-511700 PLACE ID 148049, LTF 92968 <u>SIGNIFICANT AMENDMENT</u>

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 EPCOR USA, Inc. to operate the Luke 303 Water Reclamation Facility which is located immediately south of Luke Air Force Base, ¹/₄ mile north of Camelback Road and ¹/₄ mile east of Alsup Avenue, in Litchfield Park, Arizona, in Maricopa County, over groundwater of the Phoenix Active Management Area, in Township 2N, Range 1W, Section 18, of the Gila and Salt River Baseline and Meridian.

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

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

1.1. PERMITTEE INFORMATION

| Facility Name: | Luke 303 Water Reclamation Facility | |
|---|---|---|
| Facility Address: | 5239 North Alsup Avenue | |
| County: | Maricopa | |
| Permitted Flow Rate: | 4,250,000 gallons per day | |
| Permittee: Permittee Address: | EPCOR USA, Inc. 2355 W. Pinnacle Peak Road, Suite 300 Phoenix, Arizona 85027 | |
| Facility Contact: Emergency Phone No.: | Art Nunez; Director of Central Operations (623) 587-5219 Mobile: (480) 599-3066 | SCADA: (602) 309-1226 |
| Latitude/Longitude: | 33° 30' 50" N/ 112° 23' 37" W | |
| Legal Description: | Township 2N, Range 1W, Section 18, SE ¹ / ₄ , Baseline and Meridian | NE ¹ / ₄ of the Gila and Salt River |

1.2. AUTHORIZING SIGNATURE

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

Signed this _____ day of _____, 2023

THIS AMENDED PERMIT SUPERCEDES ALL PREVIOUS PERMITS



TABLE OF CONTENTS

| 1.0 | AUTH | DRIZATION | 1 |
|------|--------------------------------|---|----|
| 1.1. | PER | MITTEE INFORMATION | 1 |
| 1.2. | AUT | HORIZING SIGNATURE | 1 |
| 2.0 | SDECU | TC CONDITIONS | 5 |
| 2.0 | SPECI | TIC CONDITIONS | |
| 2.1. | ГАС 11 | Annual Designation East | |
| 2 | 1.1.1. | Annual Registration Fee | |
| 2 | .1.2. DEC | FINANCIAL CAPADINY | / |
| 2.2. | BES | I AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT) | / |
| 2 | .2.1. | Engineering Design | / |
| | 2.2.1.1. | Recharge Basins: | ð |
| | 2.2.1.2. | Percolation Holes: | 8 |
| 2 | 2.2.1.3. | Online Analyzers: | ð |
| 2 | .2.2. | Site-Specific Characteristics | 8 |
| 2 | .2.3. | Pre-Operational Requirements | 8 |
| 2 | .2.4. | Operational Requirements | 8 |
| 2 | .2.5. | Reclaimed Water Classification | 9 |
| 2 | .2.6. | Certified Areawide Water Quality Management Plan Conformance | 9 |
| 2.3. | DISC | CHARGE LIMITATIONS | 9 |
| 2.4. | POI | NT OF COMPLIANCE (POC) | 9 |
| 2.5. | MON | VITORING REQUIREMENTS | 9 |
| 2 | .5.1. | Pre-Operational Monitoring | 10 |
| 2 | .5.2. | Routine Discharge Monitoring | 10 |
| 2 | .5.3. | Reclaimed Water Monitoring | 10 |
| 2 | .5.4. | Facility / Operational Monitoring | 10 |
| 2 | .5.5. | Groundwater Monitoring and Sampling Protocols | 10 |
| | 2.5.5.1. | POC Well Replacement | 11 |
| 2 | .5.6. | Surface Water Monitoring and Sampling Protocols | 11 |
| 2 | .5.7. | Analytical Methodology | 11 |
| 2 | .5.8. | Installation and Maintenance of Monitoring Equipment | 11 |
| 2.6. | CON | TINGENCY PLAN REQUIREMENTS | 11 |
| 2 | .6.1. | General Contingency Plan Requirements | 11 |
| 2 | .6.2. | Exceeding of Alert Levels and Performance Levels | 12 |
| | 2.6.2.1. | Exceeding of Performance Levels Set for Operational Conditions | 12 |
| | 2.6.2.2. | Exceeding of Alert Levels (ALs) Set for Discharge Monitoring | 12 |
| | 2.6.2. | 2.1. Exceeding Permit Flow Limit | |
| | 2.6.2.3. | Exceeding of Alert Levels in Groundwater Monitoring | 13 |
| | 2.6.2. | 3.1. Alert Levels for Indicator Parameters | |
| | 2.6.2. | 3.2. Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards | |
| | 2.6.2. | 3.3. Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water | |
| | 262 | Standards | |
| 2 | 63 | Discharge Limit Violation | |
| 2 | 64 | Aguifer Quality Limit Exceedances | 15 |
| 2 | 65 | Emergency Response and Contingency Requirements for Unauthorized Discharges | 15 |
| 2 | 2651 | Duty to Respond | 10 |
| | 2.0.3.1. | Discharge of Hazardous Substances or Toxic Pollutants | 10 |
| | 2.0.5.2. | Discharge of Non-Hazardous Materials | 10 |
| | 2.0.5.5. | Renorting Requirements | 10 |
| r | 2.0. <i>3</i> . 4 . | Corrective Actions | 17 |
| 7 | .0.0. | | 1/ |



| 27 | REPORTING AND RECORD/FEDING REQUIREMENTS | 17 |
|-------|--|----|
| 2.7. | Self-Monitoring Report Form | 17 |
| 2.7 | 2 Operation Inspection / Log Book Record Leeping | 17 |
| 2.7 | Permit Violation and Alert Level Status Reporting | 10 |
| 2.7 | 4 Operational Other or Miscellaneous Reporting | 10 |
| 2.7 | 5 Reporting Location | 19 |
| 2.7 | 6 Reporting Deadline | 19 |
| 2.7 | 7 Changes to Facility Information in Section 1.0 | 20 |
| 2.8. | TEMPORARY CESSATION | |
| 2.9. | CLOSURE | |
| 2.9 | .1. Closure Plan | 20 |
| 2.9 | .2. Closure Completion | 21 |
| 2.10. | POST-CLOSURE | 21 |
| 2.1 | 0.1. Post-Closure Plan | 21 |
| 2.1 | 0.2. Post-Closure Completion | 21 |
| 2.0 | | 22 |
| 5.0 | COMPLIANCE SCHEDULE | |
| 4.0 | FABLES OF MONITORING REQUIREMENTS | 25 |
| 4.1. | PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS) | 25 |
| 4.2. | COMPLIANCE (OR OPERATIONAL) MONITORING | 25 |
| 5.0 | REFERENCES AND PERTINENT INFORMATION | 38 |
| 6.0 | NOTIFICATION PROVISIONS | |
| 6.1. | ANNUAL REGISTRATION FEES | |
| 6.2. | DUTY TO COMPLY | |
| 6.3. | DUTY TO PROVIDE INFORMATION | |
| 6.4. | COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS | |
| 6.5. | TECHNICAL AND FINANCIAL CAPABILITY | |
| 6.6. | REPORTING OF BANKRUPTCY OR ENVIRONMENTAL ENFORCEMENT | |
| 6.7. | MONITORING AND RECORDS | |
| 6.8. | INSPECTION AND ENTRY | |
| 6.9. | DUTY TO MODIFY | |
| 6.10. | PERMIT ACTION: AMENDMENT, TRANSFER, SUSPENSION, AND REVOCATION | 39 |
| 7.0 | ADDITIONAL PERMIT CONDITIONS | |
| 7.1. | OTHER INFORMATION | |
| | o menti di citta minori, anno anti citta di citt | |
| 7.2. | SEVERABILITY | |

TABLE OF TABLES

| | ~ |
|---|----|
| TABLE 2: POINT(S) OF COMPLIANCE | .9 |
| TABLE 3: ACCELERATED MONITORING - ALERT LEVEL EXCEEDANCE | 3 |
| TABLE 4: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION1 | 6 |
| TABLE 5: QUARTERLY REPORTING DEADLINES1 | 9 |
| TABLE 6: (SEMI-)ANNUAL REPORTING DEADLINES | 20 |
| TABLE 7: COMPLIANCE SCHEDULE ITEMS | 22 |
| TABLE 8: FLOW MONITORING: PHASE 5 - 1.75 MGD WRF | 25 |
| TABLE 9: ROUTINE DISCHARGE MONITORING: PHASE 5 - 1.75 MGD WRF2 | 26 |
| TABLE 10: FLOW MONITORING: Phase 6 – 2.25- MGD TREATMENT TRAIN 2 | 29 |
| TABLE 11: FLOW MONITORING: PHASE 7 – 4.25- MGD TREATMENT TRAIN | 30 |



| TABLE 12: ROUTINE DISCHARGE MONITORING: PHASE 6 AND PHASE 7 (CONTINUE) | 31 |
|--|----|
| TABLE 13: RECLAIMED WATER MONITORING - CLASS A+ | 34 |
| TABLE 14: GROUNDWATER MONITORING | 35 |
| TABLE 15: FACILITY INSPECTION AND OPERATIONAL MONITORING | 37 |



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]

EPCOR Water Arizona Inc. is authorized to operate Luke 303 Water Reclamation Facility (WRF) with a flow of up to 4.25 million gallons per day (mgd), upon completion of all the phases of plant construction. The Department has graded this WRF as a Grade 4 wastewater treatment plant for all phases covered by this permit. The facility shall have an operator in direct responsible charge who is certified for the class of the facility, "Daily" for a Grade 4 WWTP¹.

The facility will be increasing the design flow to 4.25 mgd in two phases. The existing 0.25 mgd Moving Bed Bioreactor (MBBR) Package Plant will be in operation during all phases. The facility will be adding two new phases of 2.0-mgd Aerobic Granular Sludge System (AGS) each. The existing Phase 5 of 1.75 mgd consists of 0.25-mgd MBBR Package Plant and 1.5 mgd Sequencing Batch Reactor (SBR) treatment train.

0.25-mgd MBBR Package Plant: The 0.25-mgd MBBR Package Plant consists of a pre-equalization tank, a Moving Bed Bioreactor (MBBR) package treatment plant consisting of an anoxic tank, two bioreactors filled with high density polyethylene media, two circular clarifiers, a cloth media disk filter. The effluent from filter will be pumped to the chlorine contact basin for disinfection and will be de-chlorinated prior to discharge. The sludge will be stored in an aerated sludge storage tank prior to dewatering through belt press.

The 0.25-mgd MBBR Package Plant will remain in operational during all phases. It will add 0.25 mgd to the capacity of the WRF through the existing and new phases (Phases 5, 6 and 7) of operation covered by this permit.

Phase 5 - 1.75 mgd WRF: The Phase 5 - 1.75 mgd WRF consists of the 0.25-mgd MBBR Package Plant described above, and 1.5-mgd SBR Treatment Plant that contains three 0.5- mgd SBRs. The wastewater will flow to a common headworks consisting of an influent pump station which includes two 5-mgd pumps (1duty, 1standby), a 3-mm mechanical bar screen with washer and compactor and bypass 1-inch manual bar rack, before flowing into a pre-equalization tank with five pumps (1 duty, 1 standby pump for the 0.25-mgd MBBR Package Plant, and 2 duty, 1 standby pumps for 1.5-mgd SBR Treatment Train). The wastewater from pre-equalization tank will be proportionally split between the 0.25-mgd MBBR package plant and 1.5-mgd SBR treatment plant. The facility will be providing nutrient feed to add urea and phosphoric acid at the IPS to condition the influent for treatment. The historic influent pump station will be used as a plant drain and recycle flow pump station.

The 1.5-mgd SBR treatment plant consists of three 0.5 mgd SBRs with fine bubble diffusers and two duty aeration blowers, a post equalization tank/filter influent pump station with 3 pumps that pump secondary effluent to three cloth media disk filters (1 mgd, 0.59 mgd, and 0.59 mgd in capacity), before traveling to the sodium hypochlorite chlorine contact basins with sodium bisulfite de-chlorination before discharge to the recharge basins.

WAS will be discharged from the three SBRs and pumped from the 0.25-mgd package plant to an aerobic digester with fine bubble diffusers and two duty blowers, before being sent to a belt filter press for sludge dewatering. The decant liquid from the aerobic digester is sent back to the pre-equalization tank for further treatment. A common standby blower is shared between the SBR blowers and the aerobic digester blowers.

The WRF is rated as producing Class A+ reclaimed water according to A.A.C. R18-11, Article 3 in all the phases. The effluent is discharged through recharge or is reused for beneficial purposes. The facility consists of five existing recharge basins #1-2, #3N, #3S, #13E and #13W. Recharge Basins #6 and #12 have been constructed under Phase 5 operation for further effluent recharge. Each recharge basin is provided with percolation holes to enhance the recharge rates. Recharge Basins #1-2, #3N and #3S has five percolation holes in each basin, #13E and #13W have four percolation holes and #6 and #12 each have eight percolation holes.

Phase 6 - 2.25 mgd WRF: Under the Phase 6 - 2.25 mgd WRF, the facility will continue to utilize the 0.25 MBBR Package Plant and will build a tank for an Aerobic Granular Sludge (AGS) System with a capacity to treat

¹ Daily = seven days a week. In the absence of the operator in direct responsible charge, the operator in charge of the facility is certified for the applicable class of facility and at a grade no lower than one grade below the grade of the facility.



2.0 mgd. Upon commencement of AGS system operation, the existing 3 conventional SBRs will be taken offline for treatment modification for Phase 7. Phase 6 treatment train will include adding two pumps to the IPS for a total of four pumps (3 duty, 1 standby) with 5.0 mgd capacity each, adding a 3mm mechanical screen to the headworks so that Phase 6 includes two 3-mm mechanical screens with a 1-inch manual bypass screen, and a 416,472 gallon pre-equalization tank with five pumps (1 duty and 1 standby pump for the 0.25-mgd MBBR Package Plant, and 3 duty and 1 standby pumps for 2.0-mgd AGS Treatment Train). The wastewater from pre-equalization tank will be proportionally split between the 0.25-mgd MBBR Package Plant and 2.0-mgd AGS Treatment Train. The facility will continue to provide a nutrient feed to add urea and phosphoric acid at the IPS.

The 2.0-mgd AGS Treatment Train will consist of one AGS reactor with four upgraded blowers that deliver air to fine bubble diffusers. The new plant will include sludge buffer tanks, a post equalization tank with two new pumps, or five 1,111 gpm pumps total (four duty, one standby, three cloth media disk filters (2.0 mgd, 2.0 mgd and 1.0 mgd in capacity), additional four channels for chlorine contact basin. The AGS reactor will have fill, draw, react and settle cycle and will be providing nitrification/denitrification. The sludge will be digested in the existing aerobic digester with five blowers (four duty/one standby) that deliver air to the fine bubble diffusers in this aerobic digester and the aerobic digester under construction for use in Phase 7, below. The existing 2-meter belt filter press is adequate for the 4.25 MGD facility. The sludge from 0.25-mgd MBBR package plant and from the AGS SBR treatment plant is pumped to the aerobic digester. Sludge in the aerobic digester is thickened, through decanting, and is dewatered through a belt filter press.

Three new recharge basins #7, #8 and #11 will be added to the seven recharge basins from the previous phase. Recharge Basins #7, #8 and #11 will have eight percolation holes in each basin. Prior to the discharging the effluent to the recharge basins #7, #8 and #11, the facility shall submit the results of the percolation testing per Compliance Schedule Item #2.

Phase 7 - 4.25 mgd WRF: Under the Phase 7 - 4.25 mgd WRF, the facility will consist of the 0.25-mgd MBBR Package Plant, the 2.0 mgd AGS Treatment Train from Phase 6, and a second 2.0 mgd AGS reactor (converted from two of the conventional SBRs in Phase 5). Under Phase 7, the facility will be adding one additional 3mm mechanical screen, and converting the two conventional SBR from Phase 5 to 2nd 2.0-mgd AGS reactor and third SBR to a second aerobic digester.

The 4.0-mgd AGS Treatment Train will consists of two AGS reactors with fine bubble diffusers and four blowers, sludge buffer tanks, a post equalization tank with five 1,111 gpm pumps (four duty, one standby), three cloth media disk filters (2.0 mgd, 2.0 mgd and 1.0 mgd in capacity), chlorine contact basin, and de-chlorination. The sludge will be digested in two aerobic digesters with fine bubble diffusers and five blowers (four duty, one standby).

The WRF is rated as producing Class A+ reclaimed water according to A.A.C. R18-11, Article 3 in all the phases. The effluent will be disposed through recharge or will be reused for beneficial purposes. The effluent will recharge through the ten recharge basins described above.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

| Table 1: DISCHARGING FACILITIES | | |
|---------------------------------|-----------------------------|------------------------------|
| Facility | Latitude | Longitude |
| Luke 303 WRF | 33° 30' 50" N | 112° 23' 37" W |
| Recharge Basin #1-2 | 33° 30' 48.4" N | 112° 23' 35.2" W |
| Recharge Basin #3N | 33° 30' 46.2" N | 112° 23' 35.0" W |
| Recharge Basin #3S | 33° 30' 44.4" N | 112° 23' 35.0" W |
| Recharge Basin #6 | 33 [°] 30' 54.4" N | 112º 23' 44.4" W |
| Recharge Basin #7 | 33 [°] 30' 52.9" N | 112º 23' 44.4" W |
| Recharge Basin #8 | 33 ⁰ 30' 51.4" N | 112 [°] 23' 44.4" W |

The site includes the following permitted discharging facilities:



| Table 1: DISCHARGING FACILITIES | | |
|---------------------------------|-----------------------------|------------------------------|
| Recharge Basin #11 | 33 ⁰ 30' 47.0" N | 112 [°] 23' 44.4" W |
| Recharge Basin #12 | 33 ⁰ 30' 45.5" N | 112 [°] 23' 44.4" W |
| Recharge Basin #13E | 33° 30' 44.1" N | 112° 23' 42.4" W |
| Recharge Basin #13W | 33° 30' 44.2" N | 112° 23' 46.4" 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 Value Stream. 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 \$1,073,266, per the Closure Plan signed, dated, and sealed by an Arizona Registrant, Christopher J. Simko, P.E. (Civil #31713), Stantec Consultants dated January 19, 2022. The financial capability was demonstrated through performance surety bond per A.A.C. R18-9-A203(C)(2).

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

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

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

The facility has entered into 'Industrial Discharge Service Agreement (IDSA) with the industrial discharger per A.A.C. R18-9-B204(B)(6)(ii). Per the IDSA, the industrial discharger shall meet the pre-treatment performance prior to discharging to the facilities collection system.

2.2.1. Engineering Design

The recharge basins #6, #7, #8, #11 and #12 were designed as per the design report prepared and stamped, dated, and signed (sealed) by Maria Brady, P.E. (Civil #29313), Stantec Consulting Services Inc. dated January 18, 2022 and subsequent modified sealed submittals dated November 29, 2022 and January 19, 2023 that served as additions to the design report.

The 2.0 mgd and 4.0 mgd AGS Treatment Train were designed as per the design report prepared and stamped, dated, and signed (sealed) by Maria Brady, P.E. (Civil #29313) and Wei Li, P.E., Stantec Consulting Services Inc. dated January 18, 2022 and subsequent sealed submittals that served as additions to the design report.

The 0.5-mgd, 1-mgd and 1.5-mgd SBR Treatment Trains and recharge basins #13E and #13W were designed as per the design report prepared and stamped, dated, and signed (sealed) by Maria Brady, P.E. (Civil #29313) and Wei Li, P.E. (Civil #46531), Stantec Consulting Services Inc. dated July 23, 2021 and subsequent sealed submittals that served as additions to the design report.

0.25-mgd MBBR Packaged Plant and recharge basins were designed as per the design report, design drawings and additional documents prepared and stamped, dated, and signed (sealed) by Maria Brady, P.E. (Civil #29313) and Wei Li, P.E. (Civil #46531), Stantec Consulting Services Inc. dated August 20, 2020 and subsequent sealed submittals that served as additions to the design report.



Phase A WRF was designed as per the design report prepared and stamped, dated, and signed (sealed) by Rob Bryant, P.E. (Civil #42726), and John Matta, P.E. (Civil #30012) of Water Works Engineers dated March 30, 2015 and subsequent sealed submittals that served as additions to the design report.

2.2.1.1. Recharge Basins:

The recharge basins #1, #2A, and #2B were reconfigured into one single recharge basin #1-2. The facility consists of recharge basins #1-2, #3N, #3S, #13E and #13W. Under this amendment the facility has constructed the recharge basins #6 and #12. The total combined recharge rate through recharge basins and percolation holes will be 3.15 mgd for recharge basins #1-2, #3N, #3S, #13E, #13W, #6 and #12 per the latest percolation testing. The proposed recharge basins #7, #8 and #11 will be constructed under Phase 6 with an additional estimated recharge rate of 3.33 mgd for total estimated recharge rate of 6.15 mgd. The recharge basins will be five feet deep with an operating level at 3 ft. The recharge basins will maintain 2 ft of freeboard. The facility has adequate disposal capacity with one large basin out of service.

2.2.1.2. Percolation Holes:

The facility has proposed to construct percolation holes within recharge basins. Recharge Basins #1-2, #3N and #3S have five percolation holes and recharge basins #13E and #13W have four percolation holes in each basin. The percolation holes in these basins are 4 feet in diameter and approximately 75 feet deep and are filled in with ³/₈ to ³/₄ inch washed gravel. Recharge basins #6 and #12 have eight percolation holes which are 6 feet in diameter and 72 feet deep. Under Phase 6, the recharge basins #7, #8 and #11 will have eight percolation holes in each basin with an approximate depth of 75 feet deep. The percolation holes are be spaced approximately 100 ft apart in each recharge basin. The addition of the percolation holes will increase the recharge rates and the facility is anticipating the recharge rate for the percolation holes to be at least 50 gpm.

2.2.1.3. Online Analyzers:

The facility will implement online monitoring analyzers for process control of the AGS reactors. Parameters that should be considered for online monitoring include ammonia, nitrite, nitrate and TKN" this would require us to install the specific analyzers they reference.

2.2.2. Site-Specific Characteristics

Not applicable.

2.2.3. Pre-Operational Requirements

Prior to initiating construction of the Phases 6 and 7, the permittee shall submit the detailed design drawings per the Compliance Schedule Item #1 and #3, and perform the percolation testing for Recharge Basins 7, 8 and #11 per 22, Table 7: COMPLIANCE SCHEDULE ITEMS, Compliance Schedule Item #2 to the Department.

2.2.4. Operational Requirements

- 1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the treatment facility site at all times; the manual shall be available upon request during inspections by ADEQ personnel.
- 2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table 15: 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 materials used shall be documented in the



facility log book as per Section 2.7.2 and reported to ADEQ in the event of a violation or exceedance as per Section 8.

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)]

- The permittee is authorized to operate the treatment facility with a design flow of 0.25-mgd for MBBR Package Plant, 1.75 mgd SBR Treatment Train for Phase 5, 2.25-mgd AGS Treatment Train for Phase 6 and 4.25-mgd AGS Treatment Train for Phase 7. Tables are listed in Section 4.2 for discharge monitoring: Table 8, Table 9, Table 10, Table 11, Table 12 and Table 13. The permittee shall use the monitoring table which is commensurate with the phase in use at the time.
- 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 industrial/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 8, Table 9, Table 10, Table 11, Table 12 and Table 13.

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 | | | | |
|---------------------------------|---|-----------------|------------------|-----------|
| No. | POC Location | Latitude | Longitude | ADWR # |
| 1 | POC #1 is located at the northwest corner of the WRF | 33° 30' 55.4" N | 112° 23' 46.5" W | 55-920290 |

The depth to groundwater is approximately 225-240 feet below ground surface and the groundwater flow direction appears to be approximately northwest.

Groundwater monitoring is required at the point of compliance well POC #1 per Table 14: GROUNDWATER MONITORING. The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5. MONITORING REQUIREMENTS

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



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 for Phase 5 according to Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 - 1.75 mgd WRF and Phase 6 and 7 according Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7 to. Representative samples of the effluent shall be collected downstream of de-chlorination unit.

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 13: RECLAIMED WATER MONITORING for all Phases in addition to the routine discharge monitoring parameters listed in Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 - 1.75 mgd WRF and Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7. Representative samples of the reclaimed water shall be collected downstream of de-chlorination unit.

2.5.4. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 15: 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 8.

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 the low-flow purging method as described in the Arizona Water Resources Research Center, March 1995 *Field Manual for Water Quality Sampling*. The well must be purged until indicator parameters stabilize. Indicator parameters shall include dissolved oxygen, turbidity, pH, temperature, and conductivity.



2.5.5.1. 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(3), or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is fifty feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well.

2.5.6. 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. 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 Value Stream for approval prior to installation and the permit shall be amended to include any new monitoring points.

2.6. CONTINGENCY PLAN REQUIREMENTS

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

2.6.1. General Contingency Plan Requirements

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

Any AL exceedance, or violation of an AQL, DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 8, 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 plans 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

For freeboard alert levels, the permittee shall comply with the requirements as specified in Section 4.2, Table 15: FACILITY INSPECTION AND OPERATIONAL MONITORING to prevent the overtopping of recharge basins. If recharge basins are overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 8.

If an alert level set in Section 4.2, Table 15: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

- 1. Notify the Groundwater Protection Value Stream within five (5) days of becoming aware of the exceedance per Section 2.7.5.
- 2. Submit a written report to the Groundwater Protection Value Stream within 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, Table 9, Table 10, Table 11 and Table 12 have been exceeded, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameter(s) in question, if necessary to identify the cause of the exceedance.



- 2. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to the AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
- 3. Within thirty days of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Protection Value Stream 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 8: FLOW MONITORING: Phase 5 1.75 mgd WRF or Table 10: FLOW MONITORING: Phase 6 2.25- mgd Treatment Train has been exceeded, the permittee shall begin construction of the next phase, or submit a report to the ADEQ Groundwater Protection Value Stream 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.
- 2. If the AL for average monthly flow in Section 4.2, Table 11: FLOW MONITORING: Phase 7 4.25- mgd Treatment Train has been exceeded, the permittee shall submit an application to the Groundwater Protection Value Stream 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

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

- 3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Protection Value Stream, that although an AL has been exceeded, 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 the Groundwater Protection Value Stream.
- 4. Within 30 days after confirmation of an AL exceedance, for each pollutant that exceeded an AL, the permittee shall submit the laboratory results to the Groundwater Protection Value Stream 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, the Department 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 14: 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 a second report documenting an investigation of each pollutant which continued to exceed an AL to Groundwater Protection Value Stream per Section 2.7.5. This report is due within 30 days of the receipt of laboratory results of the sixth sampling event.

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

Not required at time of issuance.

2.6.2.3.4. Alert Level for Groundwater Level

- 1. If monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2 Table 14: GROUNDWATER MONITORING, the permittee shall submit a written report to the Groundwater Protection Value Stream per Section 2.7.5 within 30 days after becoming aware of the exceedance. The report shall document the following:
 - a. the as-built configuration of the well including the screened interval;
 - b. all groundwater level measurements available for the well;
 - c. a discussion and analysis of any trends or seasonal variations in the groundwater level measurements;



- d. information on groundwater recharge, withdrawal, or other hydrologic conditions in the vicinity of the well, and;
- e. any other pertinent information obtained by the permittee.
- 2. If monitoring indicates the groundwater level is not within the allowable range established by the Alert Level (AL) in Section 4.2 Table 14: GROUNDWATER MONITORING for more than six sequential sampling events, the permittee shall submit a second report which evaluates the cause(s) of the exceedance and recommends whether the well should be replaced pursuant to Section 2.5.5.1. 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, the Department may amend the permit to require replacement of the well, require additional permit conditions, or other actions.

2.6.3. Discharge Limit Violation

- 1. If a DL set in Section 4.2, Table 8, Table 9, Table 10, Table 11 and Table 12 have been violated, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Protection Value Stream according to Section 8, 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 Exceedances

- 1. If an AQL set in Section 4.2, Table 14: 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 | Quarterly | |

In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.

The permittee also shall submit a report according to Section 8, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. A verified exceedance of an AQL will be considered a violation unless the permittee demonstrates within 30 days that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, the permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water, or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

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

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[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 Value Stream within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.3. Discharge of Non-Hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged



material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Groundwater Protection Value Stream within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AQL exceedance, or could pose an endangerment to public health or the environment.

2.6.5.4. Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Groundwater Protection Value Stream per Section 2.7.5 within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 8. 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 Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, AQL, DL, or other permit condition:

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

Within 30 days of completion of any corrective action, the operator shall submit to the Groundwater Protection Value Stream 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) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1. Self-Monitoring Report Form

- 1. The permittee shall complete the Self-Monitoring 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 Value Stream.
- 3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
 - a. Table 8: FLOW MONITORING: Phase 5 1.75 mgd WRF



- b. Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 1.75 mgd WRF
- c. Table 10: FLOW MONITORING: Phase 6 2.25- mgd Treatment Train
- d. Table 11: FLOW MONITORING: Phase 7-4.25- mgd Treatment Train
- e. Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7
- f. Table 13: RECLAIMED WATER MONITORING Class A+
- g. Table 14: 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 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" for a Grade 4 WWTP 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

- The permittee shall notify the Groundwater Protection Value Stream 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, 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 the Groundwater Protection Value Stream per Section 2.7.5 within 30 days of becoming aware of the violation of any permit condition, AQL, or DL. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
 - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;



- d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
- e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
- f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.21.1, Table 15: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2, and report to the Groundwater Protection Value Stream any violations or exceedances as per Section 8.

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: <u>http://www.azdeq.gov/welcome-mydeq</u>. Contact 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 groundwaterpermits@azdeq.gov or the address listed below:

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

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 | |



| 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 | |

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

2.7.7. Changes to Facility Information in Section 1.0

The Groundwater Protection Value Stream per Section 2.7.5 shall be notified 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 Value Stream 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 Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
- 4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report "temporary cessation" in the comment section.

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

2.9. Closure

 $[A.R.S. \ \S \ 49\text{-}243(K)(6), \ 49\text{-}252 \ \text{and} \ A.A.C. \ R18\text{-}9\text{-}A209(B)]$

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection Value Stream 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 Value Stream 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 Value Stream 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(30) and Title 49, Chapter 2, Article 3;
- 4. Further action is necessary to meet property use restrictions.
- 5. SMRF submittals are still required until Clean Closure is issued.

2.10. Post-closure

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

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

In the event clean-closure cannot be achieved pursuant to A.R.S. §49-252, the permittee shall submit for approval to the Groundwater Protection Value Stream 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 Value Stream per Section 2.7.5.

| | Table 7: COMPLIANCE SCHEDULE ITEMS | | | | | | |
|-------|--|---|----------------------------------|--|--|--|--|
| No. | Description | Due By: | Permit Amendment Required? | | | | |
| Desig | n Drawings Submittal | | | | | | |
| 1 | The permittee shall submit final design drawings for 2.0 mgd AGS Treatment System under Phase 6 along with an Other Amendment application prior to commencing the construction of the AGS Treatment Train component. | Prior to commencing the construction of the 2.0 mgd AGS Treatment Train | Yes | | | | |
| 2 | The permittee shall conduct the infiltration testing of the basin floor and percolation holes including a falling head test for Recharge Basins #7, #8 and #11 to determine the actual percolation rates and demonstrate the disposal capacity of these basins. A licensed professional geotechnical engineer registered in Arizona and a geologist shall observe the construction of the recharge basin and drilling of the percolation holes and a characterization of the lithology of the drilled cuttings by a registered geologist. | Prior to operation of the Recharge Basins #7, #8 and #11 | Yes | | | | |
| 3 | The permittee shall submit final design drawings for 4.0 mgd AGS Treatment System under Phase 7 along with an Other Amendment application prior to commencing the construction of the AGS Treatment Train component. | Prior to commencing the construction of the 2.0 mgd AGS Treatment Train | Yes | | | | |
| Engir | neer's Certificate of Completion for Phase 6 | | | | | | |
| 4 | 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 units of Phase 2.0- mgd AGS Treatment Train including upgraded pump station, Aerobic Granular Sludge reactor, sludge buffer tanks, cloth media disk filters, upgraded chlorine contact basin are constructed according to the Department- approved design report or plans and specifications. The permittee shall acknowledge that the Operation and Maintenance (O&M) plan has been updated for the new treatment components. | Prior to discharging under Phase 6 and within 90 days of completion of construction of 2.0-mgd AGS Treatment Train. | No | | | | |



| | Table 7: COMPLIANCE SCHEDULE ITEMS | | | | | | |
|-------|---|---|----------------------------------|--|--|--|--|
| No. | Description | Due By: | Permit Amendment Required? | | | | |
| 5 | 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 Recharge Basins #7, #8, #11 are constructed according to the Department- approved design report or plans and specifications. The permittee shall acknowledge that the Operation and Maintenance (O&M) plan has been updated for the new treatment components. | Prior to discharging to new recharge basins under Phase 6 and within 90 days of completion of construction of recharge basins | No | | | | |
| Sewa | ge Collection System Diversion | | | | | | |
| 6 | The permittee shall only conduct sewage collection system diversion operation to the EPCOR Northwest Valley WRF via the Bell Road Lift Station as needed until the Phase 6 expansion is approved for use and has commenced operation. All vaulting and hauling related activities shall conform to an ADEQ approved standard operating procedure (SOP) "Luke 303 WRF/Northwest Vally WRF Vault & Haul Standard Operating Procedure", dated 12/7/2022. | Upon permit issuance until completion of CSI #6 | No | | | | |
| 7 | Upon ADEQ's approval of CSI #5 above the permittee shall notify ADEQ that all sewage collection system diversion operation has ceased which would have otherwise flowed to Luke 303 WRF. | Within 30 days of approval of CSI #5, but not to exceed 6 months from the date of permit issuance | No | | | | |
| Moni | toring Requirement | | | | | | |
| 8 | Upon commencing the operation of Phase 6 – 2.0 mgd AGS treatment Train, the permittee shall start the weekly grab sampling of effluent from downstream of the Aerobic Granular Sludge reactor for ammonia, nitrate, nitrite and Total Kjeldahl Nitrogen (TKN) for one-year period and submit the report to the Department. | Within 30 days of the discontinue the daily monitoring | No | | | | |
| Engir | neer's Certificate of Completion for Phase 7 | | L | | | | |



| | Table 7: COMPLIANCE SCHEDULE ITEMS | | | | | | |
|------|--|---|----------------------------------|--|--|--|--|
| No. | Description | Due By: | Permit Amendment Required? | | | | |
| 9 | The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that units of Phase 7 - 4.0- mgd AGS Treatment Train including mechanical screens, modification of SBR to Aerobic Granular Sludge reactor and aerobic digester are constructed according to the Department-approved design report or plans and specifications. The permittee shall acknowledge that the Operation and Maintenance (O&M) plan has been updated for the new treatment components. | Prior to discharging under Phase 7 and within 90 days of completion of construction of 4.0-mgd AGS Treatment Train. | No | | | | |
| Upda | te Cost Estimate and Financial Assurance Mechanism | | | | | | |
| 10 | 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 3.0, No.11 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 cash deposit as required in A.A.C. R18-9- | By March 31, 2029 and every 6 years from the date of permit signature thereafter, for the duration of the permit | No | | | | |
| | A203(C)(2). | D-M-1212020 | | | | | |
| 11 | 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. | every 6 years from the date of permit signature thereafter, for the duration of the permit | Yes | | | | |



4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable

4.2. COMPLIANCE (or OPERATIONAL) MONITORING

| Table 8: FLOW MONITORING: Phase 5 - 1.75 mgd WRF | | | | | | |
|--|-----------------------------|-------------------------------------|------------------|------------------------|------------------------|--|
| The monitoring under this tab | le shall be performed | l for 0.25-mgd M Train | IBBR Pack | age Plant and 1.5-mg | d SBR Treatment | |
| Sampling Point Number | Sampling F | Point Identificat | ion | Latitude | Longitude | |
| 1 ² (MBBR Package Plant) | Flow meter lo chlo | ocated upstream or rination unit | of the | 33° 30' 46.09" N | 112° 23' 39.6" W | |
| 2 ³ (SBR Treatment Train) | Flow meter lo chlo | ocated downstrea | m of | 33° 30' 46.6" N | 112° 23' 39.2" W | |
| Parameter | Alert Level | Discharge Limit | Units | Sampling Frequency | Reporting Frequency | |
| Phase 5 Total Flow ⁴ : Daily | Not Applicable ⁵ | Not Applicable | mgd ⁶ | Daily | Quarterly | |
| Phase 5 Total Flow: Monthly Average ⁷ | 1.663 | 1.75 | mgd | Monthly Calculation | Quarterly | |
| 0.25-mgd MBBR Package Plant ⁸ - Flow: Daily ⁹ | Not Applicable | Not Applicable | mgd | Daily | Quarterly | |
| 0.25-mgd MBBR Package Plant Flow: Monthly Average ¹⁰ | 0.238 | 0.25 | mgd | Monthly Calculation | Quarterly | |
| SBR Treatment Train Flow ¹¹ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | |
| SBR Treatment Train Flow: Monthly Average | 1.425 | 1.5 | mgd | Monthly Calculation | Quarterly | |
| Recharge Flow ¹² : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | |
| Recharge Flow: Monthly Average | 1.663 | 1.75 | mgd | Monthly Calculation | Quarterly | |
| Reuse Flow ¹³ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | |
| Reuse Flow: Monthly Average | 1.663 | 1.75 | mgd | Monthly Calculation | Quarterly | |

² Flow for 0.25-mgd Package Plant shall be recorded at Sampling Point #1

³ Flow for SBR Treatment Plant shall be recorded at Sampling Point #2.

⁴ Total daily flow for Phase 5 is the sum of the daily flow of 0.25-mgd MBBR Package Plant and SBR Treatment Train

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

 $^{^{6}}$ mgd = million gallons per day

⁷ Total monthly average flow for Phase 5 is the sum of monthly average flow from 0.25-mgd MBBR Package Plant and SBR Treatment Train ⁸ Flow from 0.25-mgd MBBR Treatment Plant

⁹ Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.

¹⁰ Monthly Average means the calculated average of daily flow values in a month

¹¹ Flow from SBR Treatment Train

¹² Recharge flow is the total flow discharged to recharge basins from 0.25-mgd MBBR Package Plant and SBR Treatment Plant

¹³ Reuse flow is the total flow discharged for reuse from 0.25-mgd MBBR Package Plant and SBR Treatment Plant



| Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 - 1.75 mgd WRF | | | | | | | |
|--|--|--------------------------------------|-------------------|------------------------|------------------------|--|--|
| The monitoring under this table shall be performed for 0.25-mgd MBBR Package Plant and 1.5-mgd SBR Treatment Train | | | | | | | |
| Sampling Point Number | Sampling 1 | Point Identifica | ation | Latitude | Longitude | | |
| 3 ¹⁴ (MBBR Package Plant & SBR Treatment Train) | Effluent sampling point located downstream of de-chlorination unit | | | 33° 30' 46.5" N | 112° 23' 39.3" W | | |
| Parameter | Alert Level | Alert Level Discharge Limit Units | | | Reporting Frequency | | |
| Fecal Coliform: Single sample maximum | Not Applicable | 23.0 | MPN ¹⁵ | Daily ¹⁶ | Quarterly | | |
| Fecal Coliform: four (4) of seven (7) samples in a week ¹⁷ | Not Applicable | Non- detect ¹⁸ | MPN | Weekly Evaluation | Quarterly | | |
| Total Nitrogen ¹⁹ :Five-sample rolling geometric mean ²⁰ | 8 | 10 | mg/l | Monthly Calculation | Quarterly | | |
| BOD ₅ (7-day average) | 45 | Not Established | mg/l | Weekly | Quarterly | | |
| BOD ₅ (30-day average) | 30 | Not Established | mg/l | Monthly | Quarterly | | |
| TSS (7-day average) | 45 | Not Established | mg/l | Weekly | Quarterly | | |
| TSS (30-day average) | 30 | Not Established | mg/l | Monthly | Quarterly | | |
| Cyanide (as free cyanide) | 0.16 | 0.2 | mg/l | Quarterly | Quarterly | | |
| Fluoride | 3.2 | 4.0 | mg/l | Quarterly | Quarterly | | |

¹⁴ The combined effluent from Packaged Plant and SBR Treatment Train sample shall be collected at Sampling Point #3 and shall be monitored for fecal coliform, total nitrogen, metals and VOCs.

 $^{^{15}}$ MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect

¹⁶ 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

¹⁷ 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

¹⁸ 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.

¹⁹ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

²⁰ 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:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$.



| Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 - 1.75 mgd WRF | | | | | | | | |
|--|--|--------------------|-------|-----------------------|------------------------|--|--|--|
| The monitoring under this table shall be performed for 0.25-mgd MBBR Package Plant and 1.5-mgd SBR Treatment Train | | | | | | | | |
| Sampling Point Number | Sampling | Point Identifica | ation | Latitude | Longitude | | | |
| 3 ²¹ (MBBR Package Plant & SBR Treatment Train) | Effluent sampling point located downstream of de-chlorination unit | | | 33° 30' 46.5" N | 112° 23' 39.3" W | | | |
| Parameter | Alert Level | Discharge Limit | Units | Sampling Frequency | Reporting Frequency | | | |
| Metals (Dissolved): | Metals (Dissolved): | | | | | | | |
| 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 | Ouarterly | Ouarterly | | | |

²¹ The combined effluent from Packaged Plant and SBR Treatment Train sample shall be collected at Sampling Point #3 and shall be monitored for fecal coliform, total nitrogen, metals and VOCs.



| Table 9: ROUTINE DISCHARGE MONITORING: Phase 5 - 1.75 mgd WRF (Continued) | | | | | | | | |
|---|---------|-------|-------|-----------------------|------------------------|--|--|--|
| The monitoring under this table shall be performed for 0.25-mgd MBBR Package Plant and 1.5-mgd SBR Treatment Train | | | | | | | | |
| Parameter | AL | DL | Units | Sampling Frequency | Reporting Frequency | | | |
| Volatile Organic Compounds | (VOCs): | | | | | | | |
| Benzene | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | | |
| Carbon tetrachloride | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | | |
| o-Dichlorobenzene | 0.48 | 0.6 | mg/l | Semi-Annually | Semi-Annually | | | |
| para-Dichlorobenzene | 0.06 | 0.075 | mg/l | Semi-Annually | Semi-Annually | | | |
| 1,2-Dichloroethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | | |
| 1,1-Dichloroethylene | 0.0056 | 0.007 | mg/l | Semi-Annually | Semi-Annually | | | |
| cis-1,2-Dichloroethylene | 0.056 | 0.07 | mg/l | Semi-Annually | Semi-Annually | | | |
| trans-1,2-Dichloroethylene | 0.08 | 0.1 | mg/l | Semi-Annually | Semi-Annually | | | |
| Dichloromethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | | |
| 1,2-Dichloropropane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | | |
| Ethylbenzene | 0.56 | 0.7 | mg/l | Semi-Annually | Semi-Annually | | | |
| 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 | | | |
| Trihalomethane (total) ²² | 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 | | | |

²²Total Trihalomethane (TTHM) is comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.



4.2 COMPLIANCE (or OPERATIONAL) MONITORING

| Table 10: FLOW MONITORING: Phase 6 – 2.25- mgd Treatment Train | | | | | | | |
|--|------------------------------|-------------------------------------|-------------------|------------------------|------------------------|--|--|
| The monitoring under this table shall be performed for 0.25-mgd MBBR Package Plant and 2.0-mgd AGS Treatment Train | | | | | | | |
| Sampling Point Number | Sampling F | Point Identificat | ion | Latitude | Longitude | | |
| 1 ²³ (MBBR Package Plant) | Flow meter lo chlo | ocated upstream or rination unit | of the | 33° 30' 46.09" N | 112° 23' 39.6" W | | |
| 2 ²⁴ (AGS Treatment Train) | Flow meter lo chlo | ocated downstrea | um of | 33° 30' 46.6" N | 112° 23' 39.2" W | | |
| Parameter | Alert Level | Discharge Limit | Units | Sampling Frequency | Reporting Frequency | | |
| Phase 6 Total Flow ²⁵ : Daily | Not Applicable ²⁶ | Not Applicable | mgd ²⁷ | Daily | Quarterly | | |
| Phase 6 Total Flow: Monthly Average ²⁸ | 2.025 | 2.25 | mgd | Monthly Calculation | Quarterly | | |
| 0.25-mgd MBBR Package Plant ²⁹ - Flow: Daily ³⁰ | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | |
| 0.25-mgd MBBR Package Plant Flow: Monthly Average ³¹ | 0.238 | 0.25 | mgd | Monthly Calculation | Quarterly | | |
| AGS Treatment Train Flow ³² : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | |
| AGS Treatment Train Flow: Monthly Average | 1.9 | 2.0 | mgd | Monthly Calculation | Quarterly | | |
| Recharge Flow ³³ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | |
| Recharge Flow: Monthly Average | 1.9 | 2.0 | mgd | Monthly Calculation | Quarterly | | |
| Reuse Flow ³⁴ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | |
| Reuse Flow: Monthly Average | 1.9 | 2.0 | mgd | Monthly Calculation | Quarterly | | |

²³ Flow for 0.25-mgd Package Plant shall be recorded at Sampling Point #1

²⁴ Flow for AGS Treatment Plant shall be recorded at Sampling Point #2.

²⁵ Total daily flow for Phase 6 is the sum of the daily flow of 0.25-mgd MBBR Package Plant and AGS Treatment Train

²⁶ Not Applicable means that monitoring is required, but no limits have been specified at the time of permit issuance

 $^{^{27}}$ mgd = million gallons per day

²⁸ Total monthly average flow for Phase 6 is the sum of monthly average flow from 0.25-mgd MBBR Package Plant and AGS Treatment Train ²⁹ Flow from 0.25-mgd MBBR Treatment Plant

³⁰ Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.

³¹ Monthly Average means the calculated average of daily flow values in a month

³² Flow from AGS Treatment Train

³³ Recharge flow is the total flow discharged to recharge basins from 0.25-mgd MBBR Package Plant and AGS Treatment Plant

³⁴ Reuse flow is the total flow discharged for reuse from 0.25-mgd MBBR Package Plant and AGS Treatment Plant



| Table 11: FLOW MONITORING: Phase 7 – 4.25- mgd Treatment Train | | | | | | | | |
|--|--|--------------------------------|-------------------|------------------------|------------------------|--|--|--|
| The monitoring under this tab | The monitoring under this table shall be performed for 0.25-mgd MBBR Package Plant and 4.0-mgd AGS Treatment Train | | | | | | | |
| Sampling Point Number | Sampling F | Point Identificat | ion | Latitude | Longitude | | | |
| 1 ³⁵ (MBBR Package Plant) | Flow meter lo chlo | ocated upstream orination unit | of the | 33° 30' 46.09" N | 112° 23' 39.6" W | | | |
| 2 ³⁶ (AGS Treatment Train) | Flow meter lo chlo | ocated downstrea | um of | 33° 30' 46.6" N | 112° 23' 39.2" W | | | |
| Parameter | Alert Level | Discharge Limit | Units | Sampling Frequency | Reporting Frequency | | | |
| Phase 7 Total Flow ³⁷ : Daily | Not Applicable ³⁸ | Not Applicable | mgd ³⁹ | Daily | Quarterly | | | |
| Phase 7 Total Flow: Monthly Average ⁴⁰ | 3.825 | 4.25 | mgd | Monthly Calculation | Quarterly | | | |
| 0.25-mgd MBBR Package Plant ⁴¹ - Flow: Daily ⁴² | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | | |
| 0.25-mgd MBBR Package Plant Flow: Monthly Average ⁴³ | 0.238 | 0.25 | mgd | Monthly Calculation | Quarterly | | | |
| AGS Treatment Train Flow ⁴⁴ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | | |
| AGS Treatment Train Flow: Monthly Average | 3.825 | 4.25 | mgd | Monthly Calculation | Quarterly | | | |
| Recharge Flow ⁴⁵ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | | |
| Recharge Flow: Monthly Average | 3.825 | 4.25 | mgd | Monthly Calculation | Quarterly | | | |
| Reuse Flow ⁴⁶ : Daily | Not Applicable | Not Applicable | mgd | Daily | Quarterly | | | |
| Reuse Flow: Monthly Average | 3.825 | 4.25 | mgd | Monthly Calculation | Quarterly | | | |

 39 mgd = million gallons per day

³⁵ Flow for 0.25-mgd Package Plant shall be recorded at Sampling Point #1

³⁶ Flow for AGS Treatment Plant shall be recorded at Sampling Point #2.

³⁷ Total daily flow for Phase 7 is the sum of the daily flow of 0.25-mgd MBBR Package Plant and AGS Treatment Train

³⁸ Not Applicable means that monitoring is required, but no limits have been specified at the time of permit issuance

⁴⁰ Total monthly average flow for Phase 7 is the sum of monthly average flow from 0.25-mgd MBBR Package Plant and AGS Treatment Train

⁴¹ Flow from 0.25-mgd MBBR Treatment Plant

⁴² Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.

⁴³ Monthly Average means the calculated average of daily flow values in a month

⁴⁴ Flow from AGS Treatment Train

⁴⁵ Recharge flow is the total flow discharged to recharge basins from 0.25-mgd MBBR Package Plant and AGS Treatment Plant

⁴⁶ Reuse flow is the total flow discharged for reuse from 0.25-mgd MBBR Package Plant and AGS Treatment Plant



| Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7 ⁴⁷ | | | | | | | |
|---|--|--------------------------------------|-------------------|------------------------|------------------------|--|--|
| The monitoring under this table shall be performed for Phase 6- 2.25-mgd Treatment Train and Phase 7- 4.25-mgd Treatment Train | | | | | | | |
| Sampling Point Number | Sampling | Point Identifica | tion | Latitude | Longitude | | |
| 3 ⁴⁸ (MBBR Package Plant & AGS Treatment Train) | Effluent sampling point located downstream of de-chlorination unit | | | 33° 30' 46.5" N | 112° 23' 39.3" W | | |
| Parameter | Alert Level | Alert Level Discharge Limit Units | | | Reporting Frequency | | |
| Fecal Coliform: Single sample maximum | Not Applicable | 23.0 | MPN ⁴⁹ | Daily ⁵⁰ | Quarterly | | |
| Fecal Coliform: four (4) of seven (7) samples in a week ⁵¹ | Not Applicable | Non- detect ⁵² | MPN | Weekly Evaluation | Quarterly | | |
| Total Nitrogen ⁵³ :Five-sample rolling geometric mean ⁵⁴ | 8 | 10 | mg/l | Monthly Calculation | Quarterly | | |
| BOD ₅ (7-day average) | 45 | Not Established | mg/l | Weekly | Quarterly | | |
| BOD ₅ (30-day average) | 30 | Not Established | mg/l | Monthly | Quarterly | | |
| TSS (7-day average) | 45 | Not Established | mg/l | Weekly | Quarterly | | |
| TSS (30-day average) | 30 | Not Established | mg/l | Monthly | Quarterly | | |
| Cyanide (as free cyanide) | 0.16 | 0.2 | mg/l | Quarterly | Quarterly | | |
| Fluoride | 3.2 | 4.0 | mg/l | Quarterly | Quarterly | | |

⁴⁷ Phase 6 and Phase 7 effluent shall be monitored under this table.

⁴⁸ The combined effluent from Packaged Plant and AGS Treatment Train sample shall be collected at Sampling Point #3 and shall be monitored for fecal coliform, total nitrogen, metals and VOCs.

⁴⁹ MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect

⁵⁰ 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

⁵¹ 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

⁵² 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.

⁵³ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

⁵⁴ 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:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$.



| Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7 ⁵⁵ (Continued) | | | | | | | | |
|---|--------|-------|-------|-----------------------|------------------------|--|--|--|
| The monitoring under this table shall be performed for Phase 6- 2.25-mgd Treatment Train and Phase 7- 4.25-mgd Treatment Train | | | | | | | | |
| Parameter | AL | DL | Units | Sampling Frequency | Reporting Frequency | | | |
| Metals (Dissolved): | | | | | | | | |
| 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 | | | |

⁵⁵Phase 6 and Phase 7 effluent for metals shall be monitored under this table.



| Table 12: ROUTINE DISCHARGE MONITORING: Phase 6 and Phase 7 ⁵⁶ (Continued) | | | | | | | |
|---|---------|-------|-------|-----------------------|------------------------|--|--|
| The monitoring under this table shall be performed for Phase 6- 2.25-mgd Treatment Train and Phase 7- 4.25-mgd Treatment Train | | | | | | | |
| Parameter | AL | DL | Units | Sampling Frequency | Reporting Frequency | | |
| Volatile Organic Compounds | (VOCs): | | | | | | |
| Benzene | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | |
| Carbon tetrachloride | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | |
| o-Dichlorobenzene | 0.48 | 0.6 | mg/l | Semi-Annually | Semi-Annually | | |
| para-Dichlorobenzene | 0.06 | 0.075 | mg/l | Semi-Annually | Semi-Annually | | |
| 1,2-Dichloroethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | |
| 1,1-Dichloroethylene | 0.0056 | 0.007 | mg/l | Semi-Annually | Semi-Annually | | |
| cis-1,2-Dichloroethylene | 0.056 | 0.07 | mg/l | Semi-Annually | Semi-Annually | | |
| trans-1,2-Dichloroethylene | 0.08 | 0.1 | mg/l | Semi-Annually | Semi-Annually | | |
| Dichloromethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | |
| 1,2-Dichloropropane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually | | |
| Ethylbenzene | 0.56 | 0.7 | mg/l | Semi-Annually | Semi-Annually | | |
| 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 | | |
| Trihalomethane (total) ⁵⁷ | 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 | | |

 ⁵⁶Phase 6 and Phase 7 effluent VOCs shall be monitored under this table.
 ⁵⁷Total Trihalomethane (TTHM) is comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.



| Table 13: RECLAIMED WATER MONITORING - Class A+ | | | | | |
|---|--|--------------------|------------------------|------------------------|--|
| Reclaimed water monitoring under Table 13: RECLAIMED WATER MONITORING for Class A+ shall be performed for Phase 5, Phase 6 and Phase 7 in addition to routine discharge monitoring. | | | | | |
| Sampling Point Number | Sampling Point Identification | | Latitude | Longitude | |
| 3 ⁵⁸ | Effluent sampling point located downstream of de-chlorination unit | | 33° 30' 46.5" N | 112° 23' 39.3" W | |
| Parameter | Discharge Limit | Units | Sampling Frequency | Reporting Frequency | |
| Fecal Coliform: Single-sample maximum | 23 | MPN ⁵⁹ | Daily ⁶⁰ | Quarterly | |
| Fecal Coliform: Four (4) of last seven (7) samples | Non-detect ⁶¹ | MPN | Daily Evaluation | Quarterly | |
| Total Nitrogen ⁶² : Five-sample rolling geometric mean ⁶³ | 10 | mg/l ⁶⁴ | Monthly Calculation | Quarterly | |
| Turbidity ⁶⁵ : Single reading | 5 | NTU ⁶⁶ | Daily ⁶⁷ | Quarterly | |
| Turbidity: 24-hour average | 2 | NTU | Daily Calculation | Quarterly | |

⁵⁸MBBR Packaged Plant, SBR Treatment Train and AGS Treatment Train effluent sample shall be collected at Sampling Point #3 and shall be monitored for fecal coliform, total nitrogen, and Turbidity.

⁵⁹MPN = Most Probable Number per 100 ml. For MPN, a value of <2.2 shall be considered to be non-detect.

⁶⁰For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each seven-day period are obtained and analyzed.

⁶¹Requires 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. ⁶²Total Nitrogen is the sum of Nitrate as N, Nitrite as N, and Total Kjeldahl Nitrogen (TKN)

⁶³The 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:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$

⁶⁴mg/l = milligrams per liter

 $^{^{65}}$ 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 66 NTU = Nephelometric Turbidity Units

⁶⁷ For the single turbidity reading, daily means the maximum reading during the 24-hour period.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

| Table 14: GROUNDWATER MONITORING | | | | | |
|---|---------------------------------|--|------------------------|------------------------|------------------------|
| Sampling Point Number | | Sampling Point Identification | | | Longitude |
| 4 | POC #1- Locate | POC #1- Located at the northwest corner of the WRF | | | 112° 23' 46.5" W |
| Parameter | Alert Level | Aquifer Quality Limit | Units | Sampling Frequency | Reporting Frequency |
| Total Nitrogen ⁶⁸ | Not Applicable ⁶⁹ | 31.0 | mg/l ⁷⁰ | Monthly Calculation | Quarterly |
| Nitrate-Nitrite as N | Not Applicable | 31.0 | mg/l | Monthly Calculation | Quarterly |
| Nitrate as N | Not Applicable | 31.0 | mg/l | Monthly | Quarterly |
| Nitrite as N | 0.8 | 1.0 | mg/l | Monthly | Quarterly |
| Total Kjeldahl Nitrogen (TKN) | Not Applicable | Not Applicable | mg/l | Monthly | Quarterly |
| Total Coliform | Not Applicable | Non-detect ⁷¹ | MPN ⁷² | Monthly | Quarterly |
| Water Level ⁷³ - Upper POC #1 | 215 | Not Applicable | Feet bgs ⁷⁴ | Monthly | Quarterly |
| Water Level - Lower POC #1 | 255 | Not Applicable | Feet bgs | Monthly | Quarterly |
| Metals (Dissolved) | | | | | |
| Antimony | 0.0048 | 0.006 | mg/l | Quarterly | Quarterly |
| Arsenic | 0.04 | 0.05 | mg/l | Quarterly | Quarterly |
| Barium | 1.60 | 2.00 | mg/l | Quarterly | Quarterly |
| Beryllium | 0.0032 | 0.004 | mg/l | Quarterly | Quarterly |
| Cadmium | 0.004 | 0.005 | mg/l | Quarterly | Quarterly |
| Chromium | 0.08 | 0.1 | mg/l | Quarterly | Quarterly |
| Cyanide (as free cyanide) | 0.16 | 0.2 | mg/l | Quarterly | Quarterly |
| Fluoride | 3.2 | 4.0 | mg/l | Quarterly | Quarterly |
| Lead | 0.04 | 0.05 | mg/l | Quarterly | Quarterly |
| Mercury | 0.0016 | 0.002 | mg/l | Quarterly | Quarterly |
| Nickel | 0.08 | 0.1 | mg/l | Quarterly | Quarterly |
| Selenium | 0.04 | 0.05 | mg/l | Quarterly | Quarterly |
| Thallium | 0.0016 | 0.002 | mg/l | Quarterly | Quarterly |

⁶⁸ Total Nitrogen is the sum of Nitrate as N, Nitrite as N, and Total Kjeldahl Nitrogen (TKN)
⁶⁹ Not Established = Monitoring is required but no limits are specified.
⁷⁰ mg/l = milligrams per liter
⁷¹ For MPN, a value of <2.2 shall be considered to be non-detect
⁷² MPN = Most Probable Number per 100 ml
⁷³ G = K = 26.22 A

⁷⁴ bgs = below ground surface

⁷³ See Section 2.6.2.3.4.



| Table 14:GROUNDWATER MONITORING (Continued) | | | | | |
|---|-----------|-------|-------|-----------------------|------------------------|
| Parameter | AL | DL | Units | Sampling Frequency | Reporting Frequency |
| Volatile Organic Compounds | s (VOCs): | | | | |
| Benzene | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually |
| Carbon tetrachloride | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually |
| o-Dichlorobenzene | 0.48 | 0.6 | mg/l | Semi-Annually | Semi-Annually |
| para-Dichlorobenzene | 0.06 | 0.075 | mg/l | Semi-Annually | Semi-Annually |
| 1,2-Dichloroethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually |
| 1,1-Dichloroethylene | 0.0056 | 0.007 | mg/l | Semi-Annually | Semi-Annually |
| cis-1,2-Dichloroethylene | 0.056 | 0.07 | mg/l | Semi-Annually | Semi-Annually |
| trans-1,2-Dichloroethylene | 0.08 | 0.1 | mg/l | Semi-Annually | Semi-Annually |
| Dichloromethane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually |
| 1,2-Dichloropropane | 0.004 | 0.005 | mg/l | Semi-Annually | Semi-Annually |
| Ethylbenzene | 0.56 | 0.7 | mg/l | Semi-Annually | Semi-Annually |
| 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) ⁷⁵ | 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 |

⁷⁵Total Trihalomethanes are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.



4.2 COMPLIANCE (or OPERATIONAL) MONITORING

| T 11 16 E A CILITY | INCORPORTION AND | ODED ATIONIAL | MONITODING |
|--------------------|------------------|---------------|------------|
| | INSPECTION AND | | |
| | | | |

| 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 8. 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 | Weekly | | |
| Treatment Plant Components | Good working condition | Weekly | | |
| AGS Treatment Tank Freeboard | One linear foot | Daily | | |
| Recharge Basin Freeboard | Two (2) Feet | Weekly | See Section 8 | |
| Recharge Basin Berm Integrity | No visible structural damage, breach, or erosion of embankments | Weekly | | |
| WRF odor control bioscrubber | Good Working Condition | 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 are functional and intact. | Monthly | See Section 8 and 2.5.5.1 | |
| Recharge Basins Vegetation Removal | No vegetation greater than 24 inches in height present in the recharge basins or within ten feet of the basins | Monthly | See Section 8 | |



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: | January 28, 2022 |
|--------------------------|-------------------|
| Contingency Plan, dated: | May 20, 2022 |
| Public Notice, dated: | February 22, 2023 |

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]

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

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

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

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

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.

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

Page 39 of 40

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

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**

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 Value Stream 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**

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.



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

[A.R.S. § 49-243(K)(8)]



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).