

**STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-100749
PLACE ID 1065, LTF 101527
SIGNIFICANT AMENDMENT**

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2, and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality (ADEQ) hereby authorizes U.S. Department of the Interior – National Park Service to operate the North Rim Wastewater Treatment Plant located at 30 Helibase Road, North Rim, Grand Canyon National Park, Coconino County, Arizona, over the groundwater of the Kanab Plateau Basin.

This permit is effective upon signature and payment of the final bill. The effective date is the date the final bill is paid, and entered below. This permit 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: North Rim Wastewater Treatment Plant
Facility Address: 30 Helibase Road, North Rim, Grand Canyon National Park, AZ 86052
County: Coconino
Permitted Flow Rate: 86,000 gallons per day (gpd)
Permittee: U.S. Department of the Interior – National Park Service
Permittee Address: P.O. Box 129
Grand Canyon, AZ 86023
Facility Contact: Adam Leavy, Chief of Facility Management and Engineering
Emergency Phone No.: (928) 310-8654
Latitude/Longitude: 36° 13' 02" N / 112° 03' 52" W
Legal Description: Township 33 N, Range 03 E, Section 34, of the Gila and Salt River Baseline and Meridian

1.2. AUTHORIZING SIGNATURE

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

Effective Date: _____ day of _____, 20____

THIS AMENDED PERMIT SUPERSEDES ALL PREVIOUS PERMITS

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1.3. COMMONLY USED ACRONYMS

A.A.C.	Arizona Administrative Code	https://apps.azsos.gov/public_services/CodeTOC.htm#ID18
A.R.S.	Arizona Revised Statutes	https://www.azleg.gov/arstitle/
A.W.Q.S.	Aquifer Water Quality Standards	A.A.C. R18-11 [ARTICLE 4]
ADEQ	Arizona Department of Environmental Quality	
ADWR	Arizona Department of Water Resources	
AL	Alert Level	
Amsl	above mean sea level	
APP	Aquifer Protection Permit	
AQL	Aquifer Quality Limit	
ASR	Aquifer Storage and Recovery	
AZPDES	Arizona Pollutant Discharge Elimination System	
BADCT	Best Available Demonstrated Control Technology	
bgs	below ground surface	
CSI	compliance schedule item	
DL	discharge limit	
DoD	Department of Defense	
EPA	Environmental Protection Agency	
ft	feet	
gpd	gallons per day	
gpm	gallons per minute	
hp	horsepower	
LTF	Licensing Time Frame	
mg/l	milligrams per liter	
MGD	Million Gallons per Day	
mm	millimeter	
MW	monitoring well	
MBR	Membrane Bioreactor	
TWWTP	Temporary Wastewater Treatment Plant	
UV	Ultraviolet	
EQ	Equalization	
WAS	Waste Activated Sludge	
O&M	Operation and Maintenance	
°F	Degrees Fahrenheit	
P.E.	Professional Engineer	
pCi/L	picocuries per liter	
POC	Point of Compliance	
PQL	Practical Quantitation Limit	
QA/QC	Quality Assurance/Quality Control	
SMRF	Self-Monitoring Report Forms	
SVOC	Semi-Volatile Organic Compound	
USGS	United States Geological Survey	
VFD	Variable Frequency Drive	
VOCs	Volatile Organic Compounds	

WRF	Water Reclamation Facility
WWTP	Wastewater treatment plant
µmhos/cm	Micromhos per centimeter (Conductivity Measurement)

2.0 SPECIFIC CONDITIONS

[A.R.S. §§ 49-203(4), 49-241(A)]

2.1. FACILITY / SITE DESCRIPTION

[A.R.S. § 49-243(K)(8), and A.A.C. R18-5-114]

The permittee is authorized to operate the Grand Canyon National Park North Rim Temporary Wastewater Treatment Plant (TWWTP), with a maximum monthly flow of 86,000 gpd and a design flow (annual average daily flow) of 60,000 gpd. ADEQ has graded this facility as a Grade 2 wastewater treatment plant (WWTP). The facility shall have an operator in direct responsible charge who is certified for the class and grade of the facility and is available to the onsite operator¹ and ensures an onsite operator visits the facility weekly.

The original facility serves domestic and commercial wastewater streams from the developed North Rim area and was permitted with an annual average daily flow of 0.15 million gallons per day (MGD). The temporary plant operates on a seasonal schedule from approximately March through November. During the winter off-season (typically November through March) when visitor services are closed, the TWWTP is shut down, and the sanitary waste stream from is diverted to a winter septic system consisting of a 40,000-gallon septic tank and an underground disposal drain field.

Treated effluent from summer operations is discharged via gravity to Outfall No. 001. The effluent is discharged through an outfall pipe featuring 1-inch orifice holes over the west-facing wall of Transept Canyon (a tributary to the Colorado River) and falls approximately 1,000 feet to the canyon bottom.

Influent sanitary sewage from the collection system is routed to a 6-foot diameter precast concrete septage receiving manhole equipped with manual plug valves, where periodic septage truck loads are dumped through a mobile, coarse metal screen mounted on top. From the receiving manhole, wastewater flows by gravity to a precast concrete screening vault featuring a 6-mm in-channel mechanical auger screen. The screening unit has an integrated compactor/press-zone with 6-mm perforations to wash, dewater, and discharge screenings via a bag hopper into a trash bin, assisted by a wash water manifold equipped with flat spray nozzles. High flows or mechanical failures bypass the screen to a manual stainless steel channel containing a 1.5-inch manual bar screen with an isolation slide gate and a standard 5-gallon screenings bucket, with a post-installed mobile davit crane base. Screened sewage flows into a 5-foot diameter wetwell of the packaged influent lift station, which has an operating volume of 1,300 gallons. The wetwell houses two submersible solids-handling pumps managed by a primary submersible pressure transducer and backup float level switches. Wastewater is pumped through a force main to a 20,000-gallon vendor-supplied equalization (EQ) tank. The EQ tank is equipped with an integrated fine 2-mm perforated plate screen and washer/compactor (with an optional screen bypass), a floor-mounted coarse bubble disk diffuser grid supplied by a dedicated blower for septicity control and solids suspension, and two transfer pumps that convey equalized flow to the core treatment units.

¹ 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.

The secondary biological treatment process consists of two parallel packaged Membrane Bioreactor (MBR) treatment units enclosed in insulated, climate-controlled steel structures. The MBR units are designed with a redundant configuration capable of processing peak flows with one unit out of service. In each unit, equalized wastewater enters through an integrated 1-mm fine perforated screen (equipped with a screen drive and washer/compactor) into a biological treatment train utilizing a Modified Ludzack-Ettinger (MLE) nitrification/denitrification process. Wastewater first enters an anoxic zone (4,300 gallons operating volume per unit) equipped with a submersible mixer mounted on slide rails to promote denitrification. It then flows by gravity to the aeration zone (11,600 gallons operating volume per unit) where biological oxidation of organic carbon and ammonia occurs. The aeration zone is equipped with a weighted stainless-steel plate holding disc-style fine bubble diffusers (1.2-mm perforation size) supplied by a regenerative blower. From the aeration zone, two submersible forward activated sludge (FAS) pumps lift the mixed liquor to two membrane tanks per unit. Each membrane tank houses a hollow fiber membrane cassette. Two variable-speed end-suction permeate pumps draw membrane permeate under vacuum into an onboard clearwell chamber, while solids are retained. Membrane fouling is mitigated by continuous air scouring from regenerative air scour blowers discharging beneath the cassettes, while mixed liquor returns to the anoxic zone via gravity overflow. Each unit utilizes one progressive cavity waste activated sludge (WAS) pump to extract sludge, and a diaphragm priming/air purging pump to clear air from the permeate lines.

Treated membrane permeate flows by gravity from each MBR unit's clearwell chamber to a common break tank located upstream of the disinfection skid. From the break tank, effluent is disinfected using a vendor-supplied closed-vessel ultraviolet (UV) disinfection system consisting of three UV units/reactors and associated controls designed for a minimum UV transmittance (UVT) of 65% and a UV dose of 40 mJ/cm². A UV recirculation pump continually recirculates water through the UV units at low flows to prevent heat buildup on the lamps. Before discharging, the disinfected effluent passes through a level-controlling, anti-siphon air break. Gravity discharge of treated effluent is continuously metered prior to entering an effluent manhole. The effluent then flows to Outfall No. 001, where it discharges to the Transept Canyon under AZPDES No. AZ0110426.

All chemical dosing systems and clean-in-place (CIP) operations are housed in two conditioned 40-foot Conex containers equipped with HVAC, water, and power services. Container 1 is divided into a Sodium Hypochlorite Room (Container 1a) and a Caustic Room (Container 1b). Container 1a stores 12.5% sodium hypochlorite in 55-gallon drums on secondary containment pallets without drain outlets, utilizing four peristaltic metering pumps enclosed in leak-capture pods to dose chemicals into the permeate piping for back pulsing and CIP. Container 1b stores 20–30% caustic soda in 55-gallon drums on containment pallets and houses two peristaltic metering pumps to dose caustic into the equalization tank for alkalinity supplement and pH control. Container 2 is divided into a Citric Acid Room (Container 2a) and a Maintenance/Storage Room (Container 2b). Container 2a stores 50% citric acid in 55-gallon drums on containment pallets and uses four peristaltic metering pumps for membrane CIP. Water pressure for screen washing and emergency fixtures is maintained by a potable water booster system, a reduced pressure zone (RPZ) backflow preventer, and a hydropneumatic tank. Waste activated sludge (WAS) is pumped by the progressive cavity WAS pumps to the existing sludge drying beds for dewatering. Filtrate from the drying beds is collected in an underdrain system and directed to a packaged filtrate lift station wetwell (5-foot diameter), which houses solids-handling pumps (1 duty / 1 standby). The filtrate is pumped through a force main back to the influent lift station for return to the headworks.

In the event of process upsets or equipment malfunctions, gravity overflows from the equalization tank screens, the MBR inlet screens, and MBR mixed liquor are routed back to the influent lift station. If the influent lift station malfunctions and wetwell levels exceed high-high thresholds, excess screened sewage is discharged via an overflow pipe by gravity to the existing 40,000-gallon winter septic tank. At the end of the seasonal operating period the TWWTP undergoes a seasonal cleanout where an estimated 20,000 gallons from the equalization tank, 53,100 gallons of liquids from the two MBR units, 5,000 gallons from the lift stations, and 17,400 gallons of biosolids from the drying beds are pumped and hauled off-site via septic trucks to the South Rim or to Flagstaff for landfill disposal at a state approved facility. For winterization, the membrane cassettes remain in place fully submerged in clean water treated with chlorine tablets, with periodic aeration and tank warmth maintained by small immersion heaters. A standby generator connection with a manual transfer switch is provided to supply power to critical winterization components during major outages. During winter administrative operations, the sanitary waste stream is diverted to the 40,000-gallon winter septic tank and underground disposal drain field.

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

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES		
Facility	Latitude (North)	Longitude (West)
North Rim WWTP Outfall 001	36° 13' 0.83"	112° 04' 0.12"

2.1.1. Annual Registration Fee

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

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

2.1.2. Financial Capability

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is \$675,000. The financial capability was demonstrated through A.A.C. R18-9-A203(B)(1), applicable to the United States government or a federal facility, as documented in the Statement of Financial Assurance submitted with the application.

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY

[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. Best Available Demonstrated Control Technology (BADCT) for this facility consists of membrane bioreactor treatment with biological nitrogen removal, ultraviolet disinfection, and disposal of treated effluent at the existing outfall under AZPDES Permit No. AZ0110426.

The treatment facility was designed not to exceed a maximum seepage rate of 550 gpd per acre for all containment structures within the treatment works.

2.2.1. Engineering Design

The North Rim Temporary Wastewater Treatment Plant was designed as per the North Rim Temporary WWTP Design Narrative design plans and design report signed, dated, and sealed by Chris Carpenter, P.E. (Professional Engineer) (Civil #85332) with HDR Inc. and Jessica Shannon, P.E. (Civil #75578) with Cloacina on March 1, 2026 and July 22, 2026, respectively.

2.2.2. Site-Specific Characteristics

Site specific characteristics were not used to determine Best Available Demonstrated Control Technology (BADCT).

2.2.3. Pre-Operational Requirements

Prior to initiating use of the temporary MBR treatment plant, influent and filtrate lift stations, equalization tank, and UV disinfection system constructed or installed under this amendment, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by ADEQ per the compliance schedule in Section 3.0. The certificate shall be submitted to ADEQ.

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 8: FACILITY INSPECTION AND OPERATIONAL MONITORING.
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s) used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in the event of a violation or exceedance per Section 2.7.3.
4. The packaged MBR treatment units and UV disinfection system shall be operated and maintained within the operating limitations specified in the manufacturers' design reports and O&M manuals, including membrane flux, mixed liquor suspended solids, scour air, and UV dose and lamp intensity requirements.
5. During the winter season, the membrane cassettes shall be winterized and maintained in accordance with the manufacturer's recommendations to prevent freeze damage, including maintaining the membrane tank contents above freezing and maintaining a minimum chlorine residual in the membrane tanks.

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)]

There is no Certified Areawide (208) Water Quality Management Plan in effect for this area. Facility operations shall conform to any Certified Areawide Water Quality Management Plan and 208 consistency determination that may be adopted for the area during the term of this permit.

2.3. DISCHARGE LIMITATIONS

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

1. The permittee is authorized to operate the temporary treatment facility with a maximum monthly flow of 86,000 gpd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the treatment facility are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BADCT, including treatment works and disposal works listed in Section 2.1.
4. Specific discharge limitations are listed in Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING.

2.4. POINT OF COMPLIANCE

[A.R.S. § 49-244]

The POC has been established at the following location:

Table 2: POINT OF COMPLIANCE				
POC #	POC Location	ADWR No.	Latitude (North)	Longitude (West)
1 (Conceptual)	Approximately 250 feet west-southwest of the WWTP	No Well	36° 13' 18"	112° 04' 42"

The depth to groundwater is estimated to be 3,000 feet below ground surface (ft bgs) with the flow direction not known.

POC No. 1 is a conceptual point of compliance; there is no well at this location and groundwater monitoring is not required except as a contingency action. A discharge impact analysis previously completed for the site, and the nitrogen budget calculations, indicated that the AWQS for nitrate would not be exceeded in the aquifer within the calculated discharge impact area. The pollutant management area is unchanged by this amendment. The Director may require an amendment of this permit to install a monitoring well if there is cause or concern that groundwater quality may be impacted at the POC. The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5. MONITORING REQUIREMENTS

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

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

2.5.1. Pre-Operational Monitoring

Not Applicable.

2.5.2. Routine Discharge Monitoring

The permittee shall monitor the effluent according to Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING. Representative samples of the effluent shall be collected at the post-UV sample point (D105), located downstream of the UV disinfection system at the AZPDES effluent outfall.

2.5.3. Reclaimed Water Monitoring

Not Applicable.

2.5.4. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 8: FACILITY INSPECTION AND OPERATIONAL MONITORING.

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

2.5.5. Groundwater Monitoring and Sampling Protocols

Routine groundwater monitoring is not required under the terms of this permit. There is no point of compliance well at this facility; the point of compliance identified in Section 2.4 is conceptual. If a groundwater monitoring well is determined to be necessary, the construction details shall be submitted to ADEQ for approval prior to installation, this permit shall be amended to include the new monitoring point together with the applicable sampling protocols, alert levels, and aquifer quality limits, and sampling shall thereafter be conducted in accordance with accepted EPA, USGS, or U.S. Department of Defense protocols.

2.5.5.1. POC Well Replacement

Not applicable.

2.5.6. Surface Water Monitoring and Sampling Protocols

Not applicable. Routine surface water monitoring is not required under the terms of this permit. Effluent discharged at the outfall is monitored under AZPDES Permit No. AZ0110426.

2.5.7. Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable contingency requirements of Section 2.6 and may propose "other actions" including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

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

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to ADEQ for approval prior to installation and the permit shall be amended to include any new monitoring points.

2.6. CONTINGENCY PLAN REQUIREMENTS

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204, R18-9-A205 and R18-9-C305(A)(1)]

2.6.1. General Contingency Plan Requirements

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

Any AL exceedance, or violation of a discharge limit (DL) or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

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

2.6.2. Exceeding of Alert Levels and Performance Levels

2.6.2.1. Exceeding of Performance Levels Set for Operational Conditions

For freeboard performance levels, the permittee shall comply with the requirements as specified in Section 4.2, Table 8: FACILITY INSPECTION AND OPERATIONAL MONITORING to prevent the overtopping of a tank, an impoundment or sludge drying bed. If a tank, an impoundment or sludge drying bed is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3. This includes releases of more than 2,000 gallons of raw influent from the collection system or a treatment process prior to biological treatment that are contained onsite.

If a performance level set in Section 4.2, Table 8: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

1. Notify ADEQ within five (5) days of becoming aware of the exceedance per Section 2.7.5.
2. Submit a written report to ADEQ within thirty (30) days after becoming aware of the exceedance per Section 2.7.5. The report shall document all of the following:
 - a. A description of the exceedance and the cause of the exceedance;
 - b. The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;

- c. Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;
- d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
- e. Any malfunction or failure of pollution control devices or other equipment or process.

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 Set for Discharge Monitoring

1. If an AL set in Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING has been exceeded, the permittee shall investigate to determine the cause of the AL exceedance within twenty-four (24) hours, or as soon as practicable. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameter(s) in question, if necessary to identify the cause of the exceedance.
2. The permittee shall initiate actions identified in the contingency plan referenced in Section 2.6.1 'General Contingency Plan Requirements' and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to the AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6 Corrective Actions.
3. Within thirty (30) days of an AL exceedance, the permittee shall submit the laboratory results to ADEQ per Section 2.7.5 along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.
4. Upon review of the submitted report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1. Exceeding Permit Flow Limit

1. If the AL for average monthly flow in Section 4.2, Table 6: ROUTINE FLOW MONITORING has been exceeded, the permittee shall submit an application to ADEQ for an Aquifer Protection Permit (APP) amendment to expand the treatment facility, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for 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

Not applicable at time of issuance

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

Not applicable at time of issuance

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

Not applicable at time of issuance

2.6.2.3.4. Alert Level for Groundwater Level

Not applicable at time of issuance

2.6.3. Discharge Limit Violation

1. If a discharge limit (DL) set in Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING has been violated, the permittee shall investigate to determine the cause within twenty-four (24) hours, or as soon as practicable. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

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

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

2.6.4. Aquifer Quality Limit Violation

Not applicable. This facility has a conceptual point of compliance and no aquifer quality limits have been established (see Section 2.4).

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[A.R.S. § 49-201(12) and § 49-241]

2.6.5.1. Duty to Respond

Within twenty-four (24) hours, or as soon as practicable, the permittee shall act to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2. Discharge of Hazardous Substances or Toxic Pollutants

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

2.6.5.3. Discharge of Non-Hazardous Materials

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

2.6.5.4. Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to ADEQ per Section 2.7.5 within thirty (30) days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6. Corrective Actions

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

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from ADEQ prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, DL, or another permit condition:

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

Within thirty (30) days of completion of any corrective action not specified in Section 2.6.1 through 2.6.5, the operator shall submit to ADEQ per Section 2.7.5, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7. REPORTING AND RECORDKEEPING REQUIREMENTS

[A.R.S. § 49-243(K)(2), A.A.C. R18-5-104, R18-9-A206(B), and R18-9-A207]

2.7.1. Self-Monitoring Report Form

1. The permittee shall complete the SMRF provided by ADEQ, and submit the completed report through the myDEQ online reporting system per Section 2.7.5. The permittee shall use the format devised by ADEQ.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter "not required" on the form, include an explanation, and submit the form to ADEQ.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
 - a. Table 6: ROUTINE FLOW MONITORING
 - b. Table 7: ROUTINE DISCHARGE MONITORING

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

2.7.2. Operation Inspection / Log Book Recordkeeping

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

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

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify ADEQ per Section 2.7.5 within five (5) days (except as provided in Section 2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges) of becoming aware of an AL exceedance, or violation of any permit condition or DL for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
2. The permittee shall submit a written report to ADEQ per Section 2.7.5 within thirty (30) days of becoming aware of the violation of any permit condition or DL. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;

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

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2, Table 8: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2, and report to ADEQ any violations or exceedances as per Section 2.7.3.

2.7.5. Reporting Location

All SMRF shall be submitted through the myDEQ portal accessible on ADEQ's website at: <https://www.azdeq.gov/mydeq>. Contact at 602-771-4571 for any inquiry related to the SMRF.

Five (5)-day and thirty (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 ADEQ's website at: <https://www.azdeq.gov/mydeq>.

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

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

2.7.6. Reporting Deadline

The following table lists the quarterly report due dates:

Table 3: QUARTERLY REPORTING DEADLINES	
Monitoring Conducted During Quarter:	Quarterly Report Due By:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

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

Table 4: (SEMI-)ANNUAL REPORTING DEADLINES	
Monitoring Conducted:	Report Due By:
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7. Changes to Facility Information in Section 1.0

ADEQ shall be notified per Section 2.7.5 within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, Certified Operator in Direct Responsible Charge or Emergency Telephone Number.

2.8. Temporary Cessation

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

The permittee shall give written notice to ADEQ per Section 2.7.5 before ceasing operation of the facility for a period of sixty (60) days or greater. Seasonal winterization of the MBR treatment plant and diversion of winter wastewater flows to the existing septic tank and drainfield, as described in Section 2.1, is an authorized mode of operation under this permit and does not by itself constitute temporary cessation. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify ADEQ with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. Submittal of SMRF is still required; report "temporary cessation" in the comment section.

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

2.9. Closure

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

For a facility addressed under this permit, the permittee shall give written notice of closure to ADEQ per Section 2.7.5 of the intent to cease operation without resuming activity for which the facility was designed or operated. Because the treatment plant authorized under this amendment is a temporary facility intended to operate until the permanent North Rim WWTP is constructed and commissioned, the permittee shall give written notice of closure upon removal of the temporary MBR treatment plant from service. Submittal of SMRF is still required; report "closure in process" in the comment section.

2.9.1. Closure Plan

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

If the results of the implemented closure plan achieves clean-closure, ADEQ will issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2. Closure Completion

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

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

SMRF submittals are required until Clean Closure is issued.

2.10. Post-closure

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

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by ADEQ.

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

2.10.1. Post-Closure Plan

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

2.10.2. Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE

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

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

Table 5: COMPLIANCE SCHEDULE ITEMS			
No.	Description	Due By:	Permit Amendment Required?
1.	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by ADEQ that confirms that the temporary MBR treatment plant and its associated treatment works and disposal works	Prior to discharging under this permit and within 90 days of completion of construction.	No

	are constructed according to the ADEQ-approved design report or plans and specifications, as applicable.		
2.	Submit performance testing results, as-built plans, and confirmation that the facility has on site a hard copy of the Operation and Maintenance (O&M) Manual, including the manufacturers' O&M manuals for the packaged MBR treatment units and the UV disinfection system.	Within 90 days of the approval to discharge under Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING.	No
3.	The permittee shall provide documentation to ADEQ that the operator in direct responsible charge holds a Grade 2 Wastewater Treatment certification consistent with the grade of the facility established in Section 2.1.	Prior to discharging under this permit.	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 6: ROUTINE FLOW MONITORING					
Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
1	Flow Meter (FIT-5071)			36° 13' 2.36"	112° 03' 53.61"
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Total Flow: Daily	Not Applicable	Not Applicable	MGD	Daily	Quarterly
Total Flow: Monthly Average	0.068	0.086	MGD	Monthly Calculation	Quarterly

Table 7: ROUTINE DISCHARGE MONITORING

Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
2	North Rim WWTP Outfall 001			36° 13' 02.0"	112° 03' 52.0"
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single sample maximum	Not Applicable	800	CFU ²	Monthly ³	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week ⁴	Not Applicable	200 ⁵	CFU	Monthly	Quarterly
Total Nitrogen ⁶ :Five-sample rolling geometric mean ⁷	8	10	mg/l	Monthly Calculation	Quarterly
Bromate	0.008	0.010	mg/l	Quarterly	Quarterly
Chlorite	0.8	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
Metals (Total)					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.008	0.010	mg/l	Quarterly	Quarterly
Barium	1.6	2	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly
Uranium	0.024	0.030	mg/l	Quarterly	Quarterly

² CFU = Colony Forming Units / 100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect.

³ 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

⁴ 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

⁵ 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 or results for that week (Sunday through Saturday) [A.A.C. R-18-9-B204(a)(i) or (b)(i)]. 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.

⁶ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

⁷ 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 7: ROUTINE DISCHARGE MONITORING (Continued)

Sampling Point Number	Sampling Point Identification			Latitude (North)	Longitude (West)
2	North Rim WWTP Outfall 001			36° 13' 02.0"	112° 03' 52.0"
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
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
Haloacetic Acids (HAA5)	0.048	0.060	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	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) ⁸	0.064	0.080	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.20	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8	10	mg/l	Semi-Annually	Semi-Annually

⁸ Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane

Table 8: FACILITY INSPECTION AND OPERATIONAL MONITORING

Pollution Control Structure/Parameter	Performance Level	Inspection Frequency	Reporting Frequency
Equalization (EQ) Tank Freeboard	One (1) Linear Foot	Daily	See Section 2.7.3
MBR Treatment Unit Integrity	Good working condition; no leaks or overflow	Daily	
Sludge Drying Bed Freeboard	Six (6) Linear Inches	Weekly	
Pump Integrity (lift stations, transfer, permeate, and WAS pumps)	Good working condition	Daily	
Treatment Plant Components	Good working condition	Daily	
UV Disinfection System	Good working condition; lamps operational and within intensity set points	Daily	
Mechanical and Fine Screens	Good working condition; no bypass except for maintenance or failure	Daily	
Sludge Drying Bed Liner and Underdrain Integrity	No cracks or leaks	Weekly	
Chemical Storage Containers and Secondary Containment	No leaks; containment pallets and piping intact; emergency shower and eyewash operational	Weekly	
Membrane Winterization (winter season)	Membrane tank contents maintained above freezing; minimum chlorine residual maintained per manufacturer	Weekly to bi-monthly	
Effect of land subsidence and earth fissures on treatment components	Visually monitor for any signs of fissure development and no visually noticeable structural impairment at the treatment plant	Monthly	

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with ADEQ:

APP Significant Amendment May 28, 2026 – HDR Inc. / National Park Service; certified by Adam Application (INV No. 100749), Leavy dated:

Sewage Treatment Facility Design Report: North Rim Temporary WWTP Design Narrative (Application Appendix D), sealed by Chris Carpenter, P.E. (AZ 85332), HDR Inc.

Engineering Plans and Specifications: North Rim Temporary WWTP drawings and specifications (Application Appendices C and E), sealed by Chris Carpenter, P.E. (AZ 85332), HDR Inc.

Contingency Plan, date and name: May 28, 2026 – Current Contingency Plan, Application Item 31

Closure and Post-Closure Strategy and Cost Estimate: May 28, 2026 – Application Item 32 and Item 18 (Appendix B), Class A estimate; closure cost estimate \$675,000

Related permit: AZPDES Permit No. AZ0110426, Outfall 001

6.0 NOTIFICATION PROVISIONS

6.1. Duty to Comply

[A.R.S. §§ 49-221 through 263]

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

6.2. Duty to Provide Information

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

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

6.3. Compliance with Aquifer Water Quality Standards

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

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

6.4. Technical and Financial Capability

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

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

6.5. Reporting of Bankruptcy or Environmental Enforcement

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

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

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

6.6. Inspection and Entry

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

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

6.7. Duty to Modify

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

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

6.8. Permit Action: Amendment, Transfer, Suspension, and Revocation

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

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of ADEQ. The permittee shall notify ADEQ in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0. ADDITIONAL PERMIT CONDITIONS**7.1. Other Information**

[A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2. Severability

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

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3. Permit Transfer

This permit may not be transferred to any other person except after notice and approval of the transfer by ADEQ. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).