ADEQ Arizona Department of Environmental Quality

Clean Air, Safe Water
Healthy Land for Everyone

DRAFT FACT SHEET

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

This document gives pertinent information concerning the reissuance of the AZPDES permit listed below. This facility is a groundwater remediation project associated with the treatment of per- and polyfluoroalkyl substances (PFAS) and is considered to be a minor facility under the AZPDES program. The effluent limitations contained in this permit will maintain the Water Quality Standards listed in Arizona Administrative Code (A.A.C.) R18-11-101 *et seq*. This permit is proposed to be issued for a period of 5 years.

I. PERMITTEE INFORMATION	
Permittee's Name:	Arizona Department of Environmental Quality (ADEQ)
Permittee's Mailing Address:	400 West Congress Street, Suite #433 Tucson, Arizona 85701
Facility Name:	Central Tucson PFAS Project (CTPP) Demonstration Facility
Facility Address or Location:	4301 East 32nd Street Tucson, Arizona 85711
County:	Pima County
Contact Person(s):	Matthew Narter, Senior Hydrogeologist (520) 770 - 3128 / narter.matthew@azdeq.gov
AZPDES Permit Number:	AZ0026212
Inventory Number:	513556
LTF Number:	113921

II. STATUS OF PERMIT(s)	
AZPDES permit applied for:	Renewal
Date application received:	December 12, 2025
Date application was determined administratively complete:	December 16, 2025
Previous permit number (if different):	N/A
Previous permit expiration date:	June 10, 2026

208 Consistency:
In accordance with A.A.C. R18-9-A903(6), a permit cannot be issued for any discharge inconsistent with a plan or plan amendment approved under section 208(b) of the Clean Water Act.

Based on review of the application, there are no changes to the facility that require a new determination of consistency with the Regional Water Quality Management Plan.

The facility is subject to an Arizona Pollutant Discharge Elimination System (AZPDES) individual permit for the discharge of treated groundwater to a Water of the United States (WOTUS). Based on the information provided in the application, the facility does not have any other ADEQ-issued permits, such as an Aquifer Protection Permit (APP), Reclaimed Water Permit, or Multi-Sector General Permit (MSGP).

III. GENERAL FACILITY INFORMATION	
Type of Facility:	Groundwater Remediation Facility
Facility Location Description:	The Facility is located at 4301 East 32nd Street, Tucson, Arizona, within the southeastern portion of the City of Tucson, approximately 6 miles southeast of downtown Tucson. Treated effluent from the facility is discharged to the City of Tucson municipal separate storm sewer system (MS4). The MS4 conveys water to the Santa Cruz River, which is located approximately six (6) miles from the facility and serves as the receiving water.
Discharge Flow:	0.36 million gallons per day (MGD)
Applicable Treatment Processes:	The facility consists of two (2) pressure vessels in a lead/lag arrangement. The system currently utilizes ion exchange (IX) resin as an adsorptive material for the removal of per- and polyfluoroalkyl substances (PFAS). Alternative adsorptive media, such as granular activated carbon (GAC) or surface-modified clay, may also be used as part of the treatment process. The removal capacity of the adsorptive media decreases over time as a function of the volume of water treated. Accordingly, the media requires periodic regeneration or replacement; the spent media is transported off-site for appropriate disposal or regeneration. The system includes two (2) bag filters (one duty, one standby) to minimize accumulation within the pressure vessels. If necessary, additional pretreatment may be incorporated to address elevated sediment levels that exceed the capacity of the bag filters. If additional PFAS removal technologies are evaluated or implemented at the facility, they will be considered part of the pretreatment system. All treated water will continue to pass through the primary adsorptive media vessels prior to discharge.

Nature of facility discharge:	The facility discharges treated groundwater from a PFAS treatment demonstration system. Groundwater is treated using adsorptive media (e.g., ion exchange resin) or other comparable media, prior to discharge to the MS4, which ultimately conveys flows to the Santa Cruz River.
Average flow per discharge:	Based on the information provided in the renewal application (Form C), the average discharge flow from the facility is approximately 0.36 MGD.
Continuous or intermittent discharge:	Continuous
Discharge pattern summary:	When operational, the discharge is continuous. Based on information provided in the renewal application, the treatment system was shut down from January 1, 2025 through October 20, 2025.

ADEQ is conducting the Central Tucson PFAS project pilot at a former Tucson Water production well site (C-0017A) to evaluate the long-term effectiveness of ion exchange treatment for the removal of PFAS from impacted groundwater. The project pilot provides a mechanism for evaluating treatment technologies, removes contaminant mass from the aquifer, and contributes to containment of a PFAS plume.

The facility discharges treated groundwater generated from the pilot system. Extracted groundwater is treated using adsorptive media, such as ion exchange (IX) resin, prior to discharge. The treated effluent is discharged to the City of Tucson municipal separate storm sewer system (MS4), which conveys water to the Santa Cruz River, the receiving water.

When the system is operational, the discharge is continuous and is expected to consist primarily of treated groundwater with reduced PFAS concentrations.

IV. RECEIVING WATER

The State of Arizona has adopted water quality standards to protect the designated uses of its surface waters. Streams have been divided into segments and designated uses assigned to these segments. The water quality standards vary by designated use depending on the level of protection required to maintain that use.

Receiving Water:	The Water of the U.S. Protected Surface Water (WOTUS PSW) for CTPP is the Santa Cruz River. This is a surface water listed in A.A.C. R18-11 Appendix B. Discharges from CTPP demonstration facility are directed to the City of Tucson's storm drain. The MS4 conveys flows through several ephemeral washes, including Citation Wash and Arroyo Chico Wash, which ultimately discharge to the Santa Cruz River, a Water of the United States. The applicable receiving water segment is the Santa Cruz River from the Agua Nueva Water Reclamation Facility (WRF) outfall to Baumgartner Road.
River Basin:	Santa Cruz River Basin
Outfall Location(s):	Outfall 001: Township 14 S, Range 14 E, Section 23 Latitude 32° 11' 48" N, Longitude 110° 54' 02" W Coordinates in Decimal Degrees: [32.19667, -110.90056]

Designated uses for the receiving water listed above:	Aquatic and Wildlife effluent dependent water (A&Wedw) Partial Body Contact (PBC)
Is the receiving water on the 303(d) list?	No, and there are no TMDL issues associated.

Given the uses stated above, the applicable narrative water quality standards are described in A.A.C. R18-11-108, and the applicable numeric water quality standards are listed in A.A.C. R18-11-109 and in Appendix A thereof. There are two standards for the Aquatic and Wildlife uses: acute and chronic. In developing AZPDES permits, the standards for all applicable designated uses are compared and limits that will protect for all applicable designated uses are developed based on the standards.

V. DESCRIPTION OF DISCHARGE

Because the facility is in operation and discharges have occurred, effluent monitoring data are available. The following is the measured effluent quality reported in the application.

Parameters	Units	Maximum Daily Discharge Concentration
Hardness	mg/L	150
pH	S.U.	7.61
Temperature	°C	28.7
Total Dissolved Solids (TDS)	mg/L	310
Total Suspended Solids (TSS)	mg/L	< 10

VI. STATUS OF COMPLIANCE WITH THE EXISTING AZPDES PERMIT

Date of Most Recent Inspection:	01/19/2024; no potential violations were noted as a result of this inspection.
Discharge Monitoring Reports (DMR) Reviewed:	01/2022 through 02/2026
Lab Reports Reviewed:	12/2021 through 10/2025
DMR Exceedances:	None
Notice(s) of Violation (NOV) Issued:	None
NOVs Closed:	N/A
Formal Enforcement Action(s):	None

VII. PROPOSED PERMIT CHANGES

The following table lists the major changes from the previous permit in this permit.

Parameter	Existing Permit	Proposed Permit	Reason for Change
Noncompliance Reporting Hotline	(602) 771-2330	Noncompliance resulting in imminent threat to human health or the environment must be reported to (602) 771-2330, while all other noncompliance must be reported to (602) 771-1440.	Routing emergency calls to the emergency hotline, but all other calls to a non-emergency number.
Reporting Location for Discharge Characterization (DC) Monitoring	Submit results through DMRs	Report results on the EC Monitoring Data Sheet Excel form provided by ADEQ and submit annually to azpdes_data@azdeq.gov by January 28th following each annual reporting period. See Part I.D.2 and Part II.B.3 of permit. Laboratory reports for DC monitoring shall be submitted through myDEQ with the last DMR of the calendar year. See Part II.B.3.b. of the permit.	ADEQ is implementing this new procedure to facilitate data analysis by ADEQ and reporting by permittees. Outcomes include expedited data processing and improved data quality review, per ADEQ Surface Water Protection Quality Assurance Program Plan (2022).
Sufficiently Sensitive Test Methods and Limit of Quantitation (LOQ) Reporting Requirements	Limited explanation of analytical requirements for LOQ	Analytical test sensitivity requirements are specified in the footnotes of Part I Tables 1-4 of the permit and associated definitions in Appendix A. Part B. The requirement to use sufficiently sensitive test methods is specified in Part II.A.5.	The Limit of Quantitation (LOQ) must be low enough to allow comparison of the results to the applicable water quality standards (WQS) to be protective of the receiving water designated uses. New language clarifies the requirement that parameters must be analyzed using sufficiently sensitive test methods in accordance with 40 CFR 136.1(c).

Parameter	Existing Permit	Proposed Permit	Reason for Change
Use of Metal Translators to Calculate Total Recoverable Permit Limits from Dissolved Criteria (Applicable to Cadmium, Chromium VI, Copper, Lead, Mercury, Nickel, Silver, and Zinc).	No metal translators were used. Assumed the ratio of dissolved to total recoverable is 1 to 1 for all metals with water quality criteria expressed as dissolved.	Water quality-based effluent limitations (WQBELs) and Assessment Levels (ALs) were converted from dissolved to total recoverable using the process from the EPA's *The Metals Translator: Guidance for Calculating A Total Recoverable Permit Limit from A Dissolved Criterion.*	New procedure for ADEQ to incorporate default metal translators when calculating total recoverable WQBELs and ALs from dissolved criteria.
Whole Effluent Toxicity (WET) Data Evaluation and Reporting	Calculation of the no observed effect concentration (NOEC) and the 25% inhibition effect concentration (IC25). Report results on the DMR as Pass (0)/Fail (1) for acute tests and 100/NOEC result in toxicity units (TUc) for chronic tests. An exceedance was any one test result greater than 1.6 TUc or any calculated monthly median value greater than 1.0 TUc or a Fail.	Pass and Fail results are declared by comparing percent effect (PE) to the regulatory management decision (RMD) threshold established for the test. For acute tests, report results as Pass (0)/Fail (1) on the DMR. For chronic tests, report Pass (0)/Fail (1) and report the PE on the DMR.	WET test results must now be analyzed and reported using the Test for Significant Toxicity (TST). This statistical approach described in EPA's National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA-833-R-10-003, 2010) and National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document (EPA-833-R-10-004, 2010) encourages the generation of higher quality WET data through increased within-test replicates or improved method precision. The TST ultimately minimizes false positive and false negative results leading to more reliable data for regulatory decision-making.

Parameter	Existing Permit	Proposed Permit	Reason for Change
WET tests with a result of Fail	WET lab reports and any required additional attachments shall be submitted to ADEQ using the myDEQ electronic portal by the 28th day of the month following the end of the WET monitoring period, or upon request.	Certified laboratory reports with a Fail test result for either an Action Level or Limit shall be emailed to AZPDES@azdeq.gov within five days of receipt.	Prompt notification of ADEQ is crucial for protecting aquatic and wildlife when toxicity is detected during action level or limitations monitoring. This new requirement for notification ensures that all necessary follow-up testing is conducted as required by the permit.
TRE Work Plan	TRE plan developed following detection of effluent toxicity	TRE Work Plan submitted to AZPDES@azdeq.gov within 90 days of permit effective date. This is required for all permittees regardless of whether effluent toxicity has been detected or not. Use the template supplied by ADEQ (See Part IV of the permit)	Permittees may be required to execute a Toxicity Reduction Evaluation (TRE) Plan to address effluent toxicity issues during the permit term. This new requirement added to all AZPDES permits with WET testing requirements ensures permittees proactively develop a systematic approach to identify and eliminate the cause of toxicity before toxicity is detected. This enables a timely response to protect aquatic and wildlife.
Narrative Surface Water Quality Standards	Narrative surface water quality standards applicable to the receiving water listed in Part I.E of the permit.	Other limitations for the effluent listed in Part I.E of the permit to ensure the discharge is protective of the narrative surface water quality standards of the receiving water.	ADEQ is clarifying all narrative permit requirements are applicable to the discharge rather than the "end result" in the receiving water in accordance with *City & County of San Francisco v. EPA.*
Total Chromium, Chromium VI, Iron, and Nickel	Effluent Characterization	Limited	Data submitted indicated reasonable potential (RP) for an exceedance of a standard.

Parameter	Existing Permit	Proposed Permit	Reason for Change
Selenium	Assessment Level	Limited	Data submitted indicated RP for an exceedance of a standard.
Cyanide	Effluent Characterization	Assessment Level	Cyanide is included as EC monitoring in the current permit; however, all data are non-detect with quantitation limits above the applicable water quality standard, and therefore cannot demonstrate concentrations below the standard. Based on the nature of the discharge and absences of cyanide sources, monitoring has been revised to assessment level to confirm this assumption and support for future reasonable potential evaluations.
Barium, Fluoride, and Manganese	No monitoring is required	DC monitoring required	No quantitative data available; the parameters are identified in the application as potentially present and are subject to applicable water quality standards. Monitoring is included to characterize the discharge and support future RP evaluation, consistent with 40 CFR §122.44(d)(1) and 122.44(i).

Parameter	Existing Permit	Proposed Permit	Reason for Change
Biochemical Oxygen Demand (BOD) or Chemical Oxygen Demand (COD)	Waived	DC monitoring required (low frequency)	No quantitative data provided in the application, although at least one analysis is required under 40 CFR §122.21. Monitoring is indicated to characterize the discharge and confirm the absence of organic loading. Based on the nature of treated groundwater and the treatment process, these parameters are not expected to be present at significant levels; however, data are required to confirm this assumption, consistent with 40 CFR §122.44(i).
Ammonia	Waived	DC monitoring required (low frequency)	No quantitative data provided in the application, although at least one analysis is required under 40 CFR §122.21. The parameter is subject to applicable water quality standards; therefore, monitoring is included to characterize the discharge and support future reasonable potential (RP) evaluation, consistent with 40 CFR §122.44(d)(1) and 122.44(i).

Parameter	Existing Permit	Proposed Permit	Reason for Change
Perfluorooctanesulfonic Acid (PFOS) & Perfluorooctanoic Acid (PFOA)	Effluent limitation based on EPA's 2016 Health Advisory Level (HAL) of 70 ng/L combined	Monitoring only (no effluent limitation)	The prior limit was based on U.S. EPA HAL guidance, which is non-regulatory and not developed as an enforceable water quality standard under the Clean Water Act (CWA). The limit was not derived using standard WQBEL procedures (40 CFR 122.44(d)(1)) and is not supported by applicable effluent limitation guidelines (ELGs). Based on new information, including improved analytical methods and additional monitoring data, ADEQ has determined that a monitoring-based approach is appropriate to characterize PFAS and support future regulatory decisions.
Treatment system and Flow though pretreatment	Ion exchange (IX) system described with fixed configuration; bag filters with potential use of desander unit; media replacement only; IX-based PFAS treatment; flow through treatment not explicitly stated.	Updated description to include IX as primary media with flexibility for alternative adsorptive media (e.g. GAC or equivalent); allows additional pretreatment components as needed; adsorptive media may be regenerated or replaced; supports use of alternative PFAS treatment technologies; clarifies that all treated water will pass through primary adsorptive media vessels prior to discharge.	Reflects current system configuration, ensures all discharge water received treatment, and provides operational flexibility to accommodate evolving PFAS treatment technologies and site-specific conditions.

Parameter	Existing Permit	Proposed Permit	Reason for Change
Effluent Limit and Assessment Level Structure (General)	Daily maximum limits only; assessment levels also expressed as daily maximum values only	Monthly average and daily maximum limits; assessment levels expressed as monthly Average and daily maximum Values	Updated evaluation indicates the need to control both short-term (acute) and long-term(chronic) impacts. Inclusion of monthly average limits for effluent limits and assessment levels ensures protection of designated uses (A&Wedw and PBC) and better characterizes variability in the discharge over time. This approach is consistent with the Clean Water Act, including 40 CFR §122.44 (d)(1) and 40 CFR §122.45 (d) which require control of both acute and chronic impacts using appropriate averaging periods.
Whole Effluent Toxicity (WET) Monitoring: Sample Type	24-hour Composite	Discrete	A discrete sample type is consistent with the monitoring requirement for all other parameters in the permit and is allowable per the EPA test methods (EPA-821-R-02-013, 2002). Pollutant concentrations in the Ground Water Treatment System (GWTS) discharge are expected to remain stable over 24-hour timeframes. Therefore, a discrete sample type satisfies the representative monitoring requirements of 40 CFR §122.44(i).

Anti-backsliding considerations — "Anti-backsliding" refers to statutory (Section 402(o) of the Clean Water Act) and regulatory (40 CFR 122.44(l)) requirements that prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limits, permit conditions, or standards that are less stringent than those established in the previous permit. The rules and statutes do identify exceptions to these circumstances where backsliding is acceptable. This permit has been reviewed and drafted with consideration of anti-backsliding concerns.

Effluent limitations for the following parameter(s) have been removed, and monitoring requirements have been retained:

- Combined Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA)

The effluent limitation in the previous permit for these parameters were expressed as the combined concentration of PFOS and PFOA and was based on the U.S. Environmental Protection Agency's HAL values. HALs are non-regulatory guidance and were not developed using Clean Water Act methodologies, including WQBEL procedures under 40 CFR

§122.44(d)(1). At the time of permit reissuance, there are no applicable promulgated water quality standards or effluent limitation guidelines for PFAS under the Clean Water Act.

Since issuance of the previous permit, additional facility-specific monitoring data and advancements in analytical methods have become available, supporting a monitoring-based approach to further characterize PFAS occurrence and concentrations in the discharge. This revision is consistent with 40 CFR §122.44(l)(2)(i)(B), which allows for less stringent effluent limitations where new information demonstrates that the previous limits are no longer necessary to ensure compliance with applicable requirements.

Although effluent limitations have been removed, monitoring for PFOA and PFOS is retained in accordance with 40 CFR §122.44(i) to characterize the discharge, evaluate variability, and support future permitting decisions. Continued monitoring will provide information necessary to assess potential impacts to receiving waters and to inform future permit conditions as analytical methods and regulatory frameworks for PFAS continue to evolve. This approach is also consistent with antidegradation requirements; see Section XII for information additional information.

No limits are less stringent due to a change in the WQS in this permit.

VIII. DETERMINATION OF EFFLUENT LIMITATIONS, OTHER LIMITATIONS, and ASSESSMENT LEVELS

When determining what parameters need monitoring and/or limits included in the permit, both technology-based and water quality-based criteria were compared and the more stringent criteria applied.

Technology-based Limitations

Technology-based effluent limitations (TBELs) are established in accordance with the Clean Water Act (CWA) and implementing regulations at 40 CFR 125.3, based on applicable effluent limitation guidelines (ELGs) or Best Professional Judgement (BPJ) where ELGs have not been promulgated.

For per- and polyfluoroalkyl substances (PFAS), including PFOA and PFOS, no federal ELGs have been promulgated for the treatment category applicable to this facility. Therefore, TBELs cannot be established based on national categorial standards.

In the absence of ELGs, ADEQ evaluated whether TBELs could be developed using Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3(c). At this time, sufficient information is not available to establish defensible technology-based effluent limitations for PFAS. Specifically:

- There are no established treatment performance standards or technology-based benchmarks applicable to PFAS under the Clean Water Act (CWA).
- PFAS treatment effectiveness varies depending on site-specific conditions and treatment technologies (e.g. granular activated carbon, ion exchange, reverse osmosis).
- Available information does not support development of consistent, enforceable technology-based limits applicable to this discharge.

Accordingly, technology-based effluent limitations for PFAS are not included in this permit.

Instead, the permit retained monitoring only for PFAS to characterize their presence and variability in the discharge and to support future evaluation of treatment performance and potential development of effluent limitations.

Water Quality-Based Effluent Limitations

Per 40 CFR 122.44(d)(1)(ii), (iii) and (iv), discharge limits must be included in the permit for parameters with "reasonable potential" (RP), that is, those known to be or expected to be present in the effluent at a level that could potentially cause any applicable numeric water quality standard to be exceeded. Numeric water quality standards are outlined in A.A.C. R18-11-109 and Appendix A. RP refers to an analysis, based on the statistical calculations using the

data submitted or consideration of other factors, to determine whether the discharge may exceed the Water Quality Standards. The procedures used to determine RP are outlined in the *Technical Support Document for Water Quality-based Toxics Control (TSD)* (EPA/505/2-90-001). In most cases, the highest reported value for a parameter is multiplied by a factor (determined from the variability of the data and number of samples) to determine a "highest estimated value." This value is then compared to the lowest applicable Water Quality Standard for the receiving water. If the value is greater than the standard, RP exists and a water quality-based effluent limitation (WQBEL) is required in the permit for that parameter. RP may also be determined from BPJ based on knowledge of the treatment facilities and other factors. The basis for the RP determination for each parameter with a WQBEL is shown in the table below.

Ammonia is not expected to be generated by the treatment process; however, it may be present at low concentrations in the source groundwater. Therefore, monitoring is included to confirm that the discharge does not exhibit RP to exceed applicable water quality standards.

For certain parameters, including barium, fluoride, and manganese, no quantitative effluent data were provided in the application. As a result, reasonable potential (RP) could not be evaluated for these parameters. In lieu of establishing water quality-based effluent limitations (WQBELs) or assessment levels (ALs), effluent characterization (EC) monitoring has been included in the permit for these parameters to characterize the discharge. Monitoring is required at a defined frequency to obtain data on the presence and variability of these pollutants in the effluent. This approach is consistent with 40 CFR §122.44(i), which requires sufficient monitoring to characterize the discharge and to support future determination of reasonable potential. As data become available, ADEQ will evaluate whether further monitoring requirements or effluent limitations are warranted in future permit actions.

The proposed permit limits were established using a methodology developed by EPA. Long Term Averages (LTA) were calculated for each designated use and the lowest LTA was used to calculate the average monthly limit (AML) and maximum daily limit (MDL) necessary to protect all uses. This methodology is described in Chapter 5 of the *TSD*, and considers water quality criteria, effluent variability, and the number of observations taken to determine compliance with prescribed limits. Limits based on A&W criteria were developed using the "two-value steady state wasteload allocation" described on page 99 of the *TSD*. When the limit is based on human health criteria, the monthly average was set at the level of the applicable standard and a daily maximum limit was determined as specified in Sections 5.4.4 and 5.5.3 of the *TSD*.

Mixing Zone

Arizona water quality rules require that water quality standards be achieved without mixing zones unless the permittee applies and is approved for a mixing zone. Since the receiving stream for this discharge is ephemeral prior to the discharge, no water is available for a mixing zone and all water quality criteria are applied at end-of pipe. This means that the effluent concentration must meet stream standards.

Assessment Levels (ALs)

ALs are listed in Part I.B of the permit. An AL differs from a discharge limit in that an exceedance of an AL is not a permit violation. Instead, ALs serve as triggers, alerting the permitting authority when there is cause for re-evaluation of RP for exceeding a water quality standard, which may result in new permit limitations. The AL numeric values also serve to advise the permittee of the analytical sensitivity needed for meaningful data collection. Trace substance monitoring is required when there is uncertain RP (based on non-detect values or limited datasets) or a need to collect additional data or monitor treatment efficacy on some minimal basis. A reopener clause is included in the permit should future monitoring data indicate water quality standards are being exceeded.

The requirement to monitor for these parameters is included in the permit according to A.A.C. R18-11-104(C) and Appendix A. ALs listed for each parameter were calculated in the same manner that a limit would have been calculated (see Water Quality-Based Effluent Limitations above).

Expression of Effluent Limitations (Concentration-Based vs. Mass-Based Limits)

Effluent limitations in this permit are expressed as concentration-based limits. Although 40 CFR §122.45(f) generally requires effluent limits to be expressed in terms of mass, ADEQ has determined that mass-based limits are not necessary for this discharge.

The facility is a groundwater remediation system with relatively consistent and controlled flow, and pollutant loading is primarily driven by influent groundwater concentrations rather than variable discharge conditions. As such, concentration-based limits are sufficient to ensure compliance with applicable water quality standards and to protect the designated uses of the receiving water.

These effluent limitations are water quality-based effluent limits (WQBELs) derived from applicable surface water quality standards associated with the designated uses of receiving water, consistent with 40 CFR §122.44(d)(1). Since the applicable standards are expressed in terms of concentration, the corresponding effluent limits are appropriately expressed as concentration-based limits.

In this context, inclusion of mass-based limits would not provide additional environmental benefit beyond that achieved through concentration-based limits. Therefore, effluent limitations are appropriately expressed in terms of concentration in this permit.

Hardness

The permittee is required to sample hardness as $CaCO_3$ at the same time the trace metals are sampled because the water quality standards for some metals are calculated using the water hardness values. The hardness value of 106 mg/L (the average hardness of the effluent as supplied in the application) was used to calculate the applicable water quality standards and any assessment levels or limits for the hardness dependent metals (cadmium, chromium III, copper, lead, nickel, silver and zinc).

Whole Effluent Toxicity (WET)

WET testing is required in the permit (Parts I.C and IV) to evaluate the discharge according to the narrative toxic standard in A.A.C. R18-11-108(A)(5), as well as whether the discharge has RP for WET per 40 CFR 122.44(d)(iv).

WET testing for chronic toxicity shall be conducted using the following three surrogate species:

- *Ceriodaphnia dubia* (water flea) – for evaluating toxicity to invertebrates
- *Pimephales promelas* (fathead minnow) – for evaluating toxicity to vertebrates
- *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata)* (a green alga) – for evaluating toxicity to plant life

ADEQ requires the permittee to analyze WET test data using the Test of Significant Toxicity (TST) statistical approach. This statistical approach is described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010; TST Implementation Document) and *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* (EPA 833-R-10-004, 2010; TST Technical Document). This statistical approach supports important choices made within a toxicity laboratory which favor quality data and ADEQ's intended levels for statistical power when true toxicity is statistically determined to be unacceptably high or acceptably low. For both acute and chronic WET test methods, the low-risk Regulatory Management Decision (RMD) threshold is set at a 10 percent mean effect at the Instream-Waste Concentration (IWC). For mean effect levels greater than 10 percent but less than the unacceptable toxicity RMD threshold (20 percent for acute and 25 percent for chronic WET tests), the TST approach will declare the IWC non-toxic depending on within-test variability. The TST maintains ADEQ's desired low false positive rate for WET methods—the probability of declaring toxicity when true toxicity is acceptably low ≤ 5%—when quality toxicity laboratories conduct toxicity tests (EPA 833-R-10-004, 2010).

ADEQ analyzed the available data and determined that the discharge does not have reasonable potential. This is because no toxicity test result is Fail (1) indicating unacceptable toxicity is not present in the effluent and no associated PE (Percent Effect) value is ≥ 10 indicating toxicity at a level higher than acceptable is not present in the effluent (see Table 1 of this fact sheet and section 1.4 and Appendix E in EPA's TST Technical Document). Thus, no toxicity WQBELs are required for the permitted discharge (40 CFR § 122.44(d)(1)). [However, ADEQ has retained the requirement for monitoring and reporting toxicity with action levels, so that effluent toxicity can be assessed in relation to CWA requirements for the permitted discharge (see Part I.C of permit).

Any failed test during a monitoring period where discharge occurred will trigger follow-up testing to determine if effluent toxicity is persistent. If toxicity above a limit or action level is found in a follow-up test, the permittee will be required to conduct a Toxicity Reduction Evaluation (TRE) based on a TRE Work Plan submitted within 90 days of the permit effective date and possibly a Toxicity Identification Evaluation (TIE) to identify the source of toxicity and decrease toxicity. The conditions described in this paragraph are required to identify and rectify sources of toxicity in discharges [A.A.C. R18-11-108(A)(5)]. A reopener clause is included in accordance with 40 CFR Parts 122 and 124 and AAC R18-9-B906.

The permit requires 24-hour composite samples be collected for WET testing. WET sampling must coincide with testing for all the parameters in Parts I.A and B of the permit when testing of those parameters is required to aid in determining the cause of toxicity if it is detected. Additional procedural requirements for the WET test are included in the permit.

The required WET monitoring frequency for this facility is consistent with the WET testing frequency required for facilities with a similar design flow. The permit requires WET test results to be reported on discharge monitoring reports (DMRs). WET laboratory reports for all WET tests performed must be attached to the corresponding DMR. When a WET limit is exceeded and the facility discharged during the monitoring period when the limit exceedance occurred, the result is subject to the Twenty-four Hour Reporting of Noncompliance requirements, per Part II.C. All action level and limit exceedance results and lab reports shall be emailed to AZPDES@azdeq.gov within five days.

Discharge Characterization (DC)

In addition to monitoring for parameters assigned either a limit or an AL, sampling is required to assess the presence of pollutants in the discharge at certain minimum frequencies for additional suites of parameters, whether the facility is discharging or not. This monitoring is specified in Tables 4.a. through 4.b., *Effluent Characterization Testing,* as follows:

- Table 4.a.—General Chemistry and Microbiology: ammonia, BOD-5 or TOC, dissolved oxygen, pH, Temperature, phosphorus, PFOS / PFOA, total dissolved solids (TDS), and total suspended solids (TSS)
- Table 4.b.—Selected Metals, Hardness, Cyanide, and WET

NOTE: Some parameters listed in Tables 4.a. and 4.b. are also listed in Tables 1 or 2. In this case, the data from monitoring under Tables 1 or 2 may be used to satisfy the requirements of Tables 4.a. and / or 4.b., provided the specified sample types are the same. In the event the facility does not discharge to a Protected Surface Water during the life of the permit, EC monitoring of representative samples of the effluent is still required.

The purpose of DC monitoring is to characterize the effluent and determine if the parameters of concern are present in the discharge and at what levels. This monitoring will be used to assess RP per 40 CFR 122.44(d)(1)(iii)). EC monitoring is required in accordance with 40 CFR 122.43(a), 40 CFR 122.44(i), and 40 CFR 122.48(b) as well as A.R.S. §49-203(A)(7). If pollutants are noted at levels of concern during the permit term, this permit may also be reopened to add related limits or conditions.

Permit Limitations and Monitoring Requirements

Table 1 summarizes the parameters that are limited in the permit and the rationale for that decision. Also included are the parameters that require monitoring without any limitations or that have not been included in the permit at all and the basis for those decisions. The corresponding monitoring requirements are shown for each parameter. In general, the regulatory basis for monitoring requirements is per 40 CFR §122.44(i) *Monitoring requirements,* and 40 CFR §122.48(b), *Required monitoring*; all of which have been adopted by reference in A.A.C. R18-9-A905, *AZPDES Program Standards*.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Flow	- - -	- - -	- - -	- - -	- - -	- - -	- - -	Discharge flow is to be monitored on a continual basis using a flow meter.
Total Suspended Solids (TSS)	TSS: 4	TSS: < 10 mg/L	N/A	N/A	No applicable standard	N/A	N/A	TSS does not have an applicable technology-based effluent limitation for this discharge. Therefore, TSS monitoring is included to characterize the discharge and evaluate treatment performance. The data will be used to support future permitting decisions and determine whether additional requirements are necessary consistent with 40 CFR 122.44 (i)
Dissolved Oxygen	0	No Data	N/A	N/A	The percent saturation of dissolved oxygen is equal to or greater than 90 percent, or single sample **minimum** concentration of 3 mg/L from 3 hours after sunrise to sunset and 1 mg/L from sunset to 3 hours after sunrise	A&Wedw	RP Indeterminate (No Data)	Monitoring is required as a discrete sample for effluent characterization.
pH	5	7.61 S.U.	N/A	N/A	Minimum: 6.5 Maximum: 9.0 A.A.C. R18-11-109(B)	A&Wedw and PBC	N/A	pH is to be monitored using a discrete sample of the effluent and a WQBEL is set. 40 CFR Part 136 specifies that grab samples must be collected for pH. At least one sample must coincide with WET testing to aid in the determination of the cause of toxicity if toxicity is detected.
Temperature	5	28.7°C	N/A	N/A	R18-11-109 C the discharge shall not cause an increase in the ambient water temperature of no more than 3.0°C	A&Wedw	N/A	Temperature of the effluent is to be monitored for effluent characterization by discrete sample. 40 CFR Part 136 specifies that discrete samples must be collected for temperature. Temperature sampling must also coincide with ammonia sampling when required.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Suspended Sediment Concentration	0	N/A	N/A	N/A	No Criteria	N/A	RP Indeterminate (No Data)	Monitoring is not required.
Total Dissolved Solids (TDS)	4	310 mg/L	N/A	N/A	No applicable standard	N/A	N/A	Monitoring required for effluent characterization.
PFOA and PFOS	14	PFOA: 2 ng/L PFOS: 4.7 ng/L	N/A	N/A	No applicable standard	N/A	N/A	Monitoring retained to characterize PFAS in the discharge. Effluent limitations are not included due to the absence of applicable Clean Water Act-based standards and effluent limitations guidelines.
Hardness	12	150 mg/L	N/A	N/A	No applicable standard. Hardness is used to determine standards for specific metal parameters.	N/A	N/A	A&W standards for cadmium, chromium III, copper, lead, nickel, silver and zinc used for RP determinations were based on the average effluent hardness value of 106 mg/L. Monitoring for hardness is required whenever monitoring for hardness dependent metals is required.
Antimony	4	< 40 µg/L	4.74	N/A	600 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization.
Arsenic	4	< 100 µg/L	4.74	N/A	150 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization.
Barium (5)	0	No Data	N/A	N/A	98,000 µg/L	PBC	RP Indeterminate (No Data)	Monitoring is required for effluent characterization for this parameter due to the absence of quantitative data, to characterize.
Beryllium (6)	3	< 0.5 µg/L	5.62	N/A	5.3 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization.
Cadmium (6)(7)	11	< 0.2 µg/L	2.90	N/A	2.34 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization.
Chromium VI (8)	2	6 µg/L	7.39	44.36	11 µg/L	A&Wedw chronic	RP Exists	Monitoring required and a WQBEL is set in the permit.
Chromium (Total)	4	< 10 µg/L	4.74	N/A	No Criteria	N/A	N/A	Monitoring required as an indicator parameter for Chromium VI.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Copper (6) (7)	11	< 1 µg/L	2.90	N/A	9.41 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization.
Cyanide	4	< 50 µg/L	4.74	N/A	9.7 µg/L	A&Wedw chronic	RP Indeterminate (High LOQ)	Monitoring is required and an assessment level is set in the permit.
Fluoride (5)	0	No Data	N/A	N/A	140,000 µg/L	PBC	RP Indeterminate (No Data)	Monitoring is required for effluent characterization for this parameter due to the absence of quantitative data, to characterize.
Hydrogen sulfide (9)	0	No Data	N/A	N/A	2 µg/L	A&Wedw chronic	N/A	Monitoring is required for sulfides as an indicator parameter for hydrogen sulfide. If sulfides are detected, monitoring for hydrogen sulfide is required for the remainder of the permit term.
Iron	4	520 µg/L	4.74	2462.74 µg/L	1,000 ug/L	A&Wedw chronic	RP Exists	Monitoring is required and a WQBEL is set in the permit.
Lead (7)	12	< 0.5 µg/L	2.80	N/A	2.68 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization..
Manganese (5)	0	No Data	N/A	N/A	130,667 µg/L	PBC	RP Indeterminate (No Data)	Monitoring is required for effluent characterization for this parameter due to the absence of quantitative data, to characterize.
Mercury	13	< 0.0005 µg/L	2.71	N/A	0.01 µg/L	A&Wedw chronic	No RP	Monitoring required for effluent characterization..
Nickel (7)	4	66 µg/L	4.74	312.58 µg/L	54.63 µg/L	A&Wedw chronic	RP Exists	Monitoring is required and a WQBEL is set in the permit.
Selenium	12	1.3 µg/L	3.14	4.09 µg/L	2 µg/L	A&Wedw chronic	RP Exists	Monitoring is required and a WQBEL is set in the permit.
Silver (7)	13	< 0.2 µg/L	2.71	N/A	3.56 µg/L	A&Wedw acute	No RP	Monitoring required for effluent characterization.
Sulfides (9)	0	No Data	N/A	N/A	No applicable standard	N/A	N/A	Indicator parameter for hydrogen sulfide. Monitoring required. If sulfides are detected, monitoring for hydrogen sulfide is required for the remainder of the permit term.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Thallium	4	< 0.2 µg/L	4.74	N/A	75 µg/L	PBC	No RP	Monitoring required for effluent characterization.
Total Dissolved Solids	4	310 mg/L	N/A	N/A	No Criteria	N/A	N/A	Monitoring required for effluent characterization.
Zinc (7)	12	< 50 µg/L	2.80	N/A	123.11 µg/L	A&Wedw acute and chronic	No RP	Monitoring required for effluent characterization.
Whole Effluent Toxicity (WET)								
Ceriodaphnia dubia (Water flea)	1	-10.43 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Wedw	RP Indeterminate (10)	Monitoring required and an action level is set.
Pimephales promelas (Fathead minnow)	1	-2.36 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Wedw	RP Indeterminate (10)	Monitoring required and an action level is set.
Pseudo-kirchneriella subcapitata (Green Alga) (11)	1	-6.80 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Wedw	RP Indeterminate (10)	Monitoring required and an action level is set.

Footnotes:

1. Maximum quantified result or maximum reporting limit, whichever is highest. A maximum reporting limit is indicated with less than "<" sign.
2. Reasonable potential (RP) multiplier is a factor applied to the limited dataset reported to ADEQ by the permittee over the current permit term. This factor is a function of the sample count and coefficient of variation for the dataset that is used to approximate the 99th percentile value at a 99% confidence level based on a lognormal distribution.
3. This refers to the applicable designated use that determines the lowest (most protective) water quality standard for each pollutant. Designated use abbreviations are defined in A.A.C. R18-11-101.
4. The monitoring frequencies are as specified in the permit.
5. Monitoring is required for effluent characterization for these parameters. The permittee identified these parameters as potentially present in the discharge; however, no quantitative data were provided. Therefore, ADEQ cannot determine reasonable potential and has included these parameters for monitoring to characterize the discharge.
6. For beryllium (four data points) and for cadmium and copper (twelve data points), all data points were reviewed; one (1) data point each was excluded from the RP analysis due to an unacceptable data qualifier (L4), as the associated blank spike recovery was below method acceptance limits; the remaining data points were used in the RP analysis.
7. Hardness-dependent metal - the standard for this parameter is based on the average hardness value of the effluent as indicated above.
8. For chromium VI (four data points), all data points were reviewed; two data points were excluded from the RP analysis due to an unacceptable data qualifier (H1 & H3), as the samples were analyzed and/or received past holding time; the remaining data points were used in the RP analysis.
9. Monitoring for sulfide and hydrogen sulfide is not required, as these parameters are not expected in discharges from a groundwater treatment facility, unlike typical wastewater treatment systems.
10. Monitoring with ALs or Action Levels always required for WWTPs for these parameters unless RP exists and limits are set.
11. Formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata*

VIII. NARRATIVE WATER QUALITY STANDARDS

Narrative standards applicable to the receiving water are listed in A.A.C. R18-11-108. Part I of the permit contains discharge limitations, other limitations, and monitoring requirements to ensure the discharge is protective of the receiving water, including the narrative standards.

The applicable narrative standards follow below in italics. How ADEQ implements the standard in the permit follows the standard.

A surface water shall not contain pollutants in amounts or combinations that:

Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life;

- The permit requires monitoring for Total Suspended Solids (TSS). Given the nature of the discharge from a groundwater treatment facility, TSS monitoring is considered sufficient to evaluate and control potential sediment-related impacts and to ensure the discharge does not cause bottom deposits. The effluent limit for TSS ensures the discharge does not cause bottom deposits.

Cause objectionable odor in the area in which the surface water is located;

- The permit contains a narrative requirement that the discharge must not contain objectionable odor.

Cause off-flavor in aquatic organisms; and Are toxic to humans, animals, plants, or other organisms;

- This permit contains requirements for Whole Effluent Toxicity (WET) Testing to ensure the discharge is free from toxicity. The permit also contains discharge characterization monitoring to assess the quality of the discharge and determine what parameters of concern are present in the discharge and at what levels. Technology-based limitations (TBELs) are not applicable to this discharge. The permit includes applicable water quality based effluent limitations (WQBELs), where reasonable potential exists, to ensure the discharge is non-toxic and safe for aquatic organisms, wildlife, and human health.

Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses;

- Based on the nature of the discharge form a groundwater treatment facility, the discharge is not expected to contain nutrients at levels that would promote the growth of algae or aquatic plants. Accordingly, the discharge is not anticipated to cause conditions that would impair recreational uses, and nutrient monitoring is not required.

Change the color of the surface water from natural background levels of color.

- The permit contains a narrative requirement that the discharge must not contain unnatural color.

A surface water shall not contain oil, grease, or any other pollutant that floats as debris, foam, or scum; or that causes a film or iridescent appearance on the surface of the water; or that causes a deposit on a shoreline, bank, or aquatic vegetation.

- The permit contains a narrative requirement that the discharge shall be free from oil, grease and other pollutants that float as debris, foam, or scum; and a film or iridescent appearance.

A surface water shall not contain a discharge of suspended solids in quantities or concentrations that interfere with the treatment processes at the nearest downstream potable water treatment plant or substantially increase the cost of handling solids produced at the nearest downstream potable water treatment plan.

- The permit requires monitoring for Total Suspended Solids (TSS) to characterize particulate matter in the discharge. Based on the nature of the discharge from a groundwater treatment facility, the discharge is not expected to interfere with treatment processes at the nearest downstream potable water treatment plant or

substantially increase the cost of handling solids. Accordingly, the discharge is not anticipated to adversely affect downstream potable water treatment operations.

A surface water shall not contain solid waste such as refuse, rubbish, demolition or construction debris, trash, garbage, motor vehicles, appliances, or tires.

- The permit contains a narrative requirement that the discharge must not contain refuse, rubbish, demolition or construction debris, trash, or garbage. Motor vehicles, appliances, or tires are not expected to be present in the discharge.

IX. MONITORING AND REPORTING REQUIREMENTS (Part II of Permit)

Section 308 of the Clean Water Act and 40 CFR Part 122.44(i) require that monitoring be included in permits to determine compliance with effluent limitations. Additionally, monitoring may be required to gather data for future effluent limitations or to monitor effluent impacts on receiving water quality.

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Monitoring frequencies for some parameters may be reduced in subsequent permits if all monitoring requirements have been met and the limits or ALs for those parameters have not been exceeded during the first permit term.

For the purpose of this permit, discrete (i.e., grab) samples are specified for all parameters. As this facility treats groundwater, the influent and resulting effluent are expected to be relatively steady-state, and the quality of the discharge is not anticipated to be highly variable. Therefore, discrete sampling is sufficient to obtain representative data of the discharge in accordance with 40 CFR §122.44(i).

Monitoring locations are specified in the permit (Part I.A and Part II.A) in order to ensure that representative samples of the discharge are consistently obtained.

The requirements in the permit pertaining to Part II, Monitoring and Reporting, are included to ensure that the monitoring data submitted under this permit is accurate in accordance with 40 CFR 122.41(j). The permittee has the responsibility to determine that all data collected for purposes of this permit meet the requirements specified in this permit and is collected, analyzed, and properly reported to ADEQ.

The permit (Part II.A.3) requires the permittee to keep a Quality Assurance (QA) manual at the facility, describing sample collection and analysis processes; the required elements of the QA manual are outlined.

Reporting requirements for monitoring results are detailed in Part II, Section B of the permit, including completion and submittal of Discharge Monitoring Reports (DMRs), and AZPDES Flow Record forms.

The permittee is responsible for conducting all required monitoring and reporting the results to ADEQ on DMRs or as otherwise specified in the permit.

Electronic Reporting

The US EPA has published a final regulation that requires electronic reporting and sharing of Clean Water Act National Pollutant Discharge Elimination System (NPDES) program information instead of the current paper-based reporting (Federal Register, Vol. 80, No. 204, October 22, 2015). Beginning December 21, 2016 (one year after the effective date of the regulation), the Federal rule required permittees to make electronic submittals of any monitoring reports and forms called for in their permits. ADEQ has created an online portal called myDEQ that allows users to submit their discharge monitoring reports and other applicable reports required in the permit.

Requirements for retention of monitoring records are detailed in Part II.D.1 of the permit.

X. BIOSOLIDS REQUIREMENTS (Part III in Permit)

Not Applicable

XI. SPECIAL CONDITIONS (Part V in Permit)

Permit Reopener

This permit may be modified based on newly available information; to add conditions or limits to address demonstrated effluent toxicity; to implement any EPA-approved new Arizona water quality standard; or to re-evaluate reasonable potential (RP), if assessment levels in this permit are exceeded [A.A.C. R18-9-B906 and 40 CFR Part 122.62 (a) and (b)].

XII. ANTIDEGRADATION

Antidegradation rules have been established under A.A.C. R18-11-107 to ensure that existing surface water quality is maintained and protected. The discharge from the Central Tucson PFAS Demonstration Facility will be to an effluent-dependent water. Except for flows resulting from rain events, the only water in the stream will be the discharge. Therefore, the discharge and the receiving water will normally be one and the same. Effluent quality limitations and monitoring requirements have been established under the proposed permit to ensure that the discharge will meet the applicable water quality standards. As long as the permittee maintains consistent compliance with these provisions, the designated uses of the receiving water will be presumed protected, and the facility will be deemed to meet currently applicable antidegradation requirements under A.A.C. R18-11-107.

XIII. STANDARD CONDITIONS

Conditions applicable to all NPDES permits in accordance with 40 CFR, Part 122 are attached as an appendix to this permit.

XIV. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-A907)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft AZPDES permit or other significant action with respect to an AZPDES permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed on ADEQ's website or in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period (A.A.C. R18-9-A908)

Rules require that permits be public noticed on ADEQ's website or in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-A908(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

EPA Review (A.A.C. R18-9-A908(C))

A copy of this permit and any revisions made to this draft as a result of public comments received will be sent to EPA Region 9 for review. If EPA objects to a provision of the draft, ADEQ will not issue the permit until the objection is resolved.

XV. ADDITIONAL INFORMATION

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Surface Water Permits Unit
Attn: Swathi Kasanneni
1110 West Washington Street
Phoenix, Arizona 85007

Or by contacting Swathi Kasanneni at (602) 771 – 4577 or by e-mail at kasanneni.swathi@azdeq.gov.

XVI. INFORMATION SOURCES

While developing effluent limitations, monitoring requirements, and special conditions for the permit, the following information sources were used:

1. AZPDES Permit Application Form(s) 2A and 2S (or insert other forms submitted), received December 12, 2025, along with supporting data, facility diagram, and maps submitted by the applicant with the application forms.

2. Supplemental information to the application received by ADEQ on March 17, 2026 and April 17, 2026.

3. ADEQ files on Central Tucson PFAS Project Demonstration Facility.

4. ADEQ Geographic Information System (GIS) Website.

5. Arizona Administrative Code (AAC) Title 18, Chapter 11, Article 1, *Water Quality Standards for Surface Waters,* adopted December 31, 2016.

6. A.A.C. Title 18, Chapter 9, Article 9. *Arizona Pollutant Discharge Elimination System* rules.

7. Code of Federal Regulations (CFR) Title 40:
   Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.*
   Part 124, *Procedures for Decision Making*.
   Part 133. *Secondary Treatment Regulation.*
   Part 503. *Standards for the Use or Disposal of Sewage Sludge*.

8. EPA Technical Support Document for Water Quality-based Toxics Control (EPA-505-2-90-001, 1991).

9. U.S. EPA NPDES permit Writers' manual, September 2010.

10. The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion, US EPA (EPA-823-B-96-007, 1996).

11. National Pollutant Discharge Elimination System Whole Effluent Toxicity Permit Writers' Manual, U.S. EPA (EPA-

833-B-24-001).

12. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821-R-02-012, 2002).

13. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013, 2002).

14. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, U.S. EPA (EPA-833-R-10-003, 2010).

15. *Method Guidance and recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)* (EPA-821-B-00-004, 2000).

16. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document, U.S. EPA (EPA-833-R-10-004, 2010).