

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

This document gives pertinent information concerning the reissuance of the AZPDES permit listed below. This facility is a WQARF site groundwater remediation system with a design capacity of 0.36 million gallons per day (mgd) and is considered to be a minor facility under the NPDES 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:	Pima County Department of Environmental Quality, Solid Waste Division
Permittee's Mailing Address:	5301 W. Ina Road, Tucson AZ 85743
Facility Name:	El Camino del Cerro WQARF Site Groundwater Treatment System
Facility Address or Location:	3243 W. Diamond Street, Tucson, AZ 85743
County:	Pima
Contact Person(s): Phone/e-mail address	Judy Tovar, Pima County Solid Waste Division Manager (520) 724-9795, Judy.Tovar@pima.gov
AZPDES Permit Number:	AZ0026093
Inventory Number:	106359
LTF Number:	93821

II. STATUS OF PERMIT(s)	
AZPDES permit applied for:	Renewal
Date application received:	03/28/2022
Date application was determined administratively complete:	05/02/2022
Previous permit number (if different):	N/A
Previous permit expiration date:	10/24/2022
<u>208 Consistency:</u>	
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. This is a permit renewal with no significant change, thus no new 208 plan consistency review is required.	

Other ADEQ Permits:

Pima County Department of Environmental Quality, Solid Waste Division does not have and is not required to have an Aquifer Protection Permit (APP) for discharges from this facility. Pursuant to A.R.S. § 49-250(B)(11), closed facilities such as the former El Camino del Cerro Landfill are exempt from APP requirements. A.R.S. § 49-201(7)(a) defines a closed facility as one that ceased operation before January 1, 1986 with no intent to resume operation. Pursuant to A.R.S. § 49-250(B)(18)(d), a remedial action such as this facility which has been approved by ADEQ is exempt from APP requirements.

III. GENERAL FACILITY INFORMATION

Type of Facility:	This is a groundwater treatment system at a Water Quality Assurance Revolving Fund (WQARF) site. The facility treats volatile organic compound (VOC) impacted groundwater that is extracted from Well CDC-PEX2 with air stripping technology. Treated effluent is discharged.
Facility Location Description:	The facility is located on the northwest side of Tucson, Arizona approximately 0.1 mile west of I-10 on W Diamond St, approximately ¼ mile north of W El Camino del Cerro in Tucson. The facility is almost ¼ mile east of the Santa Cruz River, which is the receiving water.
Discharge Flow:	The facility is in standby mode. Flow is 250 gallons per minute (gpm) for 15 minutes during a single annual discharge equaling a maximum daily discharge of 3,750 gallons or 0.00375 million gallons per day (mgd). The facility design capacity is continuous flow up to 250 gpm or 0.36 mgd.
Applicable Treatment Processes:	<u>Air Stripping Technology:</u> Groundwater is pumped into the top of an Air Stripper Unit. Fresh air from a blower is directed up through the water causing highly volatile VOCs to transfer to the vapor phase for capture by a vapor phase carbon vessel. The treated water is discharged.
Nature of facility discharge:	Treated groundwater from a WQARF site. VOCs of concern are tetrachloroethylene, trichloroethylene, cis-1,2-dichloroethene, and vinyl chloride.
Average flow per discharge:	250 gpm <u>Standby mode:</u> 3,750 gallons (0.00375 mgd) <u>Design flow:</u> Continuous (0.360 mgd)
Continuous or intermittent discharge:	Current status is standby. Flow is intermittent. Discharge is for 15 minutes at 250 gpm one day each year for annual sampling. The facility could be activated to in-service mode (continuous discharge) to protect the environment if annual groundwater monitoring of pollutants identifies a need for treatment activity to recommence.
Discharge pattern summary:	Discharge flow records submitted during the existing permit term indicate the facility discharges 1 time per year in the winter or spring for 15 minutes at a flow rate of 250 gpm. Pima County Department of Environmental Quality, Solid Waste Division requested the renewal permit to allow for reactivation of continuous discharge at a rate of 0.360 mgd if groundwater pollutant concentrations indicate the need for treatment.

Site History:

The El Camino del Cerro (ECDC) Landfill was operated as a municipal solid waste landfill from 1973 through 1977. Pima County initiated the Landfill Environmental Studies Program (LESP) that traced the source of groundwater contamination to the landfill in 1983 and placed an earthen cap over the landfill in 1989. Subsequent investigations identified groundwater contamination down-gradient of the former landfill. The former ECDC Landfill is part of a WQARF remediation site. Available data showed that there was a single VOC plume and supported administratively combining the El Camino del Cerro and Shannon Road-Rillito Creek WQARF sites into one site in the fall of 2004. In June 2009, Pima County Solid Waste Division began operating a Shallow Tray Air Stripper treatment system at the former ECDC Landfill. In early 2017 chlorinated solvent concentrations were decreased to low levels and the system was placed in standby mode and only operated to conduct annual sampling.

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 (Federal):	The Water of the U.S. Protected Surface Water (WOTUS PSW) for El Camino del Cerro WQARF Site Groundwater Treatment System Outfall 001 is the Santa Cruz River from the Agua Nueva WWTP outfall to Baumgartner Road.
River Basin:	Santa Cruz – Rio Magdalena – Rio Sonoyta
Outfall Location:	Outfall 001: Township 13 South, Range 13 East, Section 17 Latitude 32° 17' 51.45" N, Longitude 111° 02' 19.96" W
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
Antimony	µg/L	<1
Arsenic	µg/L	2.00
Beryllium	µg/L	<0.4
Cadmium	µg/L	<0.1
Chromium	µg/L	<1
Copper	µg/L	<10
Cyanide	µg/L	<50
Dissolved Oxygen	mg/L	7.64
Hardness (as CaCO ₃)	mg/L	671
Iron	µg/L	300
Lead	µg/L	<0.5
Mercury	µg/L	<0.2
Nickel	µg/L	<0.5
Nitrate (as N)	µg/L	13,600
Nitrate + Nitrite	µg/L	13,600
Nitrogen	µg/L	14,100
pH	S.U.	7.87
Phosphorus	µg/L	200
Selenium	µg/L	1.4
Silver	µg/L	<0.5
Sulfide (as S)	mg/L	<0.1
Temperature	°C	22.78
Thallium	µg/L	<0.1
Zinc	µg/L	19
1,2-Cis-Dichloroethylene	µg/L	<0.5
Tetrachloroethylene (PCE)	µg/L	<0.5
Trichloroethylene (TCE)	µg/L	<0.4
Vinyl Chloride	µg/L	<0.2

VI. STATUS OF COMPLIANCE WITH THE EXISTING AZPDES PERMIT	
Date of Most Recent Inspection:	02/15/2018 Inspection Type: File Review No potential violations were noted as a result of this inspection.
DMR Files Reviewed:	12/28/2017 through 01/21/2022
Lab Reports Reviewed:	04/11/2018 through 01/21/2022
DMR Exceedances:	None
NOVs Issued:	None
NOVs Closed:	N/A
Compliance Orders:	None

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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.
AZPDES Discharge Flow Record	None	Add AZPDES discharge flow record as Appendix B	Monitor infrequent discharge according to the definition of <i>Discharge of a pollutant</i> 40 CFR 122.2(a).
Special Conditions	Reopener	Add Notification of Operation Status Change	Notify ADEQ if operation status changes from standby mode.
1,2-cis-dichloroethylene, Tetrachloroethylene, Trichloroethylene, and Vinyl Chloride	Limit	Effluent characterization added	Monitor remedial action site contaminants of concern whether discharging or not.
Mercury	Assessment Level	Limit	Data submitted indicated reasonable potential (RP) for an exceedance of a standard.
Iron	Effluent Characterization	Limit	Data submitted indicated reasonable potential (RP) for an exceedance of a standard.
pH	Limit	Effluent characterization added	Data submitted exhibit an exceedance of a standard. Monitor whether discharging or not.
Whole Effluent Toxicity - acute (<i>Pimephales promelas</i> and <i>Ceriodaphnia dubia</i>)	None	Action level	Acute WET testing required when discharge is of short duration
Whole Effluent Toxicity - acute (<i>Pimephales promelas</i> and <i>Ceriodaphnia dubia</i>)	None	Effluent characterization	Acute WET testing required whether discharging or not.

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.

No limits have been removed from the permit. Limits are retained in the permit for parameters where reasonable potential (RP) for an exceedance of a standard continues to exist or is indeterminate. In these cases, limits will be recalculated using the most current Arizona Water Quality Standards (WQS). If less stringent limits result due to a change in the WQS then backsliding is allowed in accordance with 303(d)(4) if the new limits are consistent with antidegradation requirements and the receiving water is in attainment of the new standard; see Section XII for information regarding antidegradation requirements.

VIII. DETERMINATION OF EFFLUENT 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: There are no promulgated technology-based limits for a groundwater treatment system such as the El Camino del Cerro WQARF Site Groundwater Treatment System. However, it has been demonstrated that this technology allows for efficient removal of volatile organic compounds (VOCs), and the discharge can be sampled with low detection limits. Based on a review of the data submitted by the applicant and using best professional judgment (BPJ), technology-based limits have been set for 1,2-cis-Dichloroethylene (c-DCE), and trichloroethylene (TCE), tetrachloroethylene (PCE) and vinyl chloride. These parameters have been detected in the groundwater. The proposed limits are based on Safe Drinking Water Act maximum contaminant levels (MCLs) consistent with other similar remedial project dischargers

Numeric Water Quality Standards: As outlined in A.A.C. R18-11-109 and Appendix A:

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. 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.

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 takes into account criteria, effluent variability, and the number of observations taken to determine compliance with the limit and is described in Chapter 5 of the TSD. 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 Section 5.4.4 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)

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 Numeric Water Quality Standards Section above).

Hardness

The permittee is required to sample hardness as CaCO₃ 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 average hardness of the effluent as supplied in the application was 545 mg/L, however the hardness value of 400 mg/L 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) in accordance with A.A.C. R18-11 Appendix A Table 1. Footnote d.ii.

Whole Effluent Toxicity (WET)

WET testing is required in the permit (Parts I.B and III) 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 does not have a numeric standard for Whole Effluent Toxicity. However, ADEQ adopted the EPA recommended chronic toxicity benchmark of 1.0 Toxic Unit-Chronic (TU_c) for a four day exposure period. Using this benchmark, the limitations and/or action levels for WET included in the permit were calculated in accordance with the methods specified in the *TSD*. The species chosen for WET testing are as recommended in the *TSD* and in *Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs*.

An exceedance of a limit or action level 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) and possibly a Toxicity Identification Evaluation (TIE) to identify the source of toxicity and reduce toxicity. These conditions are required to ensure that toxicants are not discharged in amounts that are toxic to organisms [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 discrete samples be collected for WET testing. A discrete sample type was chosen in order to have consistency with the type of sample required for other parameters requiring monitoring in this permit. WET sampling must coincide with testing for all the parameters in Parts I.A of the permit, when testing of those parameters is required, to aid in the determination of the cause of toxicity if toxicity is detected. Additional procedural requirements for the WET test are included in the proposed 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 and submittal of the full WET lab report to ADEQ.

Effluent Characterization (EC)

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 3.a. through 3.b., *Effluent Characterization Testing*, as follows:

- Table 3.a.—General Chemistry and Microbiology: ammonia, BOD-5, *E. coli*, total residual chlorine (TRC), dissolved oxygen, total Kjeldahl nitrogen (TKN), nitrate/nitrite, oil and grease, pH, phosphorus, temperature, total dissolved solids (TDS), and total suspended solids (TSS)
- Table 3.b. —Selected Metals, Hardness, Cyanide, and WET

NOTE: Some parameters listed in Tables 3.a. and 3.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 3.a. and / or 3.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 EC 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	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Flow	---	---	---	---	---	Discharge flow is to be monitored on a continual basis using a flow meter.
pH (2)	Minimum: 6.5 Maximum: 9.0 A&Wedw and PBC A.A.C. R18-11-109(B)	7.87	3	N/A	WQBEL	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	R18-11-109C the discharge shall not cause an increase in the ambient water temperature. A&Wedw: no more than 3.0°C	22.78°C	4	N/A	N/A	Effluent temperature is to be monitored for effluent characterization by discrete sample. 40 CFR Part 136 specifies that discrete samples must be collected for temperature.
Dissolved Oxygen		7.64 mg/L	4	N/A	N/A	Monitoring required for effluent characterization.
Hardness	No applicable standard. Hardness is used to determine standards for specific metal parameters.	671 mg/L	4	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. Monitoring for hardness is required whenever monitoring for hardness dependent metals is required.
Nitrogen	No applicable standard	14.1 mg/L	4	N/A	N/A	Monitoring required for effluent characterization.
Phosphorus	No applicable standard	200 µg/L	4	N/A	N/A	Monitoring required for effluent characterization.
Antimony	600 µg/L A&Wedw chronic	<1 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Arsenic	150 µg/L A&Wedw chronic	2.0 µg/L	4	9.5 µg/L	No RP	Monitoring required for effluent characterization.
Beryllium	5.3 µg/L A&Wedw chronic	<0.4 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Cadmium (2)	7.31 µg/L A&Wedw chronic	<0.1 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Chromium (Total)	No applicable standard	0.76 µg/L	4	3.6 µg/L	N/A	Monitoring required as an indicator parameter for Chromium VI.
Chromium VI	11 µg/L A&Wedw chronic	N/A	N/A	N/A	N/A	Monitoring required for effluent characterization if total chromium exceeds 8 µg/L.

Footnotes:

1. The monitoring frequencies are as specified in the permit.
2. Hardness-dependent metal - the standard for this parameter is based on the average hardness value of the effluent as indicated above.
3. Formerly known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*.
4. Monitoring with ALs or Action Levels always required for these parameters unless RP exists and limits are set.

Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use		Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Copper (2)	30.50 µg/L A&Wedw chronic		1.3 µg/L	4	6.2 µg/L	No RP	Monitoring required for effluent characterization.
Cyanide	9.7 µg/L A&Wedw chronic		<50 µg/L	4	N/A	RP Indeterminate (High LOQ)	Monitoring is required and a QBEL is set.
Iron	1,000 ug/L A&Wedw chronic		300 µg/L	4	1400 µg/L	RP Exists	Monitoring is required and a QBEL is set.
Lead (2)	15 µg/L PBC		<0.5 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Mercury	0.01 µg/L A&Wedw chronic		0.11 µg/L	4	0.52 µg/L	RP Exists	Monitoring is required and a QBEL is set.
Nickel (2)	169 µg/L A&Wedw chronic		<0.5 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Selenium	2 µg/L A&Wedw chronic		1.4 µg/L	4	6.6 µg/L	RP Exists	Monitoring is required and a QBEL is set.
Silver (2)	41 µg/L A&Wedw acute		<0.5 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Sulfides	No applicable standard		<0.1 mg/L	4	N/A	N/A	Indicator parameter for hydrogen sulfide. Monitoring required for effluent characterization.
Thallium	75 µg/L PBC		<0.1 µg/L	4	N/A	No RP	Monitoring required for effluent characterization.
Zinc (2)	388 µg/L A&Wedw acute and chronic		19 µg/L	4	90 µg/L	No RP	Monitoring required for effluent characterization.
1,2-cis-Dichloroethylene	70 µg/L PBC		<0.5 µg/L	1	N/A	RP Exists (Anti-backsliding)	Monitoring required and a TBEL remains in the permit.
Tetrachloroethylene	680 µg/L A&Wedw chronic		<0.5 µg/L	1	N/A	RP Exists (Anti-backsliding)	Monitoring required and a TBEL remains in the permit.
Trichloroethylene	280 µg/L PBC		<0.4 µg/L	1	N/A	RP Exists (Anti-backsliding)	Monitoring required and a TBEL remains in the permit.
Vinyl chloride	2800 µg/L PBC		<0.2 µg/L	1	N/A	RP Exists (Anti-backsliding)	Monitoring required and a TBEL remains in the permit.
Whole Effluent Toxicity (WET)	No toxicity (A.A.C. R18-11-108(A) (6))	<i>Pseudo-kirchneriella subcapitata</i> (3)	1.0 TUc	0	N/A	RP Indeterminate	Monitoring required and an action level is set.
		<i>Pimephales promelas</i>	1.0 TUc	0	N/A	RP Indeterminate	Monitoring required and an action level is set.
		<i>Ceriodaphnia dubia</i>	1.0 TUc	0	N/A	RP Indeterminate	Monitoring required and an action level is set.

Footnotes:

- 1 The monitoring frequencies are as specified in the permit.
- 2 Hardness-dependent metal - the standard is for this parameter is based on the average hardness value of the effluent as indicated above.
- 3 Formerly known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*.
- 4 Monitoring with ALs or Action Levels always required for these parameters unless RP exists and limits are set.

VIII. NARRATIVE WATER QUALITY STANDARDS

All narrative limitations in A.A.C. R18-11-108 that are applicable to the receiving water are included in Part I, Section D of the permit.

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.

Discrete (i.e., grab) samples are specified in the permit for all parameters. The quality of the discharge is not expected to be highly variable.

Monitoring locations are specified in the permit (Part I.A and Part II.A.1) in order to ensure that representative samples of the influent and effluent 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(e). 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). 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.C.3 of the permit.

XI. SPECIAL CONDITIONS (Part IV in Permit)

The permittee shall notify ADEQ AZPDES Individual Permit Unit within 5 business days of a change to facility operation status from standby mode defined as discharge from Outfall 001 occurring during a single 15-minute flow event at 250 gpm (total discharge is 3,750 gal) during a calendar year.

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 El Camino del Cerro WQARF Site Groundwater Treatment System will be to an effluent-dependent water. Except for flows resulting from rain events, the only water in the river will be the effluent. 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 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 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: Corin Hammond
1110 West Washington Street
Phoenix, Arizona 85007

Or by contacting Corin Hammond at (602) 771 – 4144 or by e-mail at hammond.corin@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 Forms 1 and 2C, received March 28, 2022, 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 April 11, 2022; April 14, 2022; and May 02, 2022.
3. ADEQ files on El Camino del Cerro WQARF Site Groundwater Treatment System.
4. ADEQ Geographic Information System (GIS) Web site
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*.
8. EPA Technical Support Document for Water Quality-based Toxics Control dated March 1991.
9. *Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs*, US EPA, May 31, 1996.
10. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA /821-R-02-013).
11. U.S. EPA NPDES Permit Writers' Manual, September 2010.
12. *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion*, US EPA, June 1996.