

## ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

This document gives pertinent information concerning the reissuance of the AZPDES permit listed below. This facility is a water treatment plant that treats contaminated groundwater down gradient from the Globe-Miami mining district and is operated as a remedial action at the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) site. This facility is considered a minor facility under the AZPDES program. The discharge 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:	Freeport-McMoRan Miami, Inc. (FMMI) Pinal Creek Project
Permittee's Mailing Address:	P.O. Box 1270 Claypool, AZ 85532
Facility Name:	Lower Pinal Creek Water Treatment Plant (LPCWTP)
Facility Address or Location:	3515 Wheatfields Road Globe, AZ 85501
County:	Gila
Contact Person(s): Phone/e-mail address	Frankie DalMolin - Chief Environmental Specialist, Pinal Creek Project (928) 701-3957 / fdalmoli@fmi.com
AZPDES Permit Number:	AZ0024350
Inventory Number:	103997
LTF Number:	104315

II. STATUS OF PERMIT(S)	
AZPDES permit applied for:	Renewal
Date application received:	<b>July 2, 2024</b>
Date application was determined administratively complete:	August 20, 2024
Previous permit expiration date:	December 30, 2024
<p><b>208 Consistency:</b></p> <p>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.</p> <p>208 Plan consistency is not required for industrial facilities.</p>	

<b>III. GENERAL FACILITY INFORMATION</b>	
Type of Facility:	Water treatment plant for groundwater remediation for high metal content.
Facility Location Description:	LPCWTP is located approximately 10 miles northwest of the City of Globe.
Discharge Flow:	9.36 MGD
Applicable Treatment Processes:	Contaminated groundwater is pumped from the aquifer at the Lower Pinal Creek well field for capture and treatment. Water is piped from the well field to the LPCWTP located at Latitude 33° 30' 56" N, Longitude 110° 51' 55" W. Following equalization in a lined pond, the LPCWTP treats contaminated groundwater using a two-stage addition of base (lime and/or soda ash) to neutralize the acidity of the influent combined with sedimentation/clarification step after each addition of base. The higher pH decreases the heavy metal ions solubility and increases colloidal stability for removal by a clarifier. The discharge is neutralized using acid addition to meet surface water quality standards for pH and passed through sand filtration prior to release via Outfall 001 to Pinal Creek downstream of the well field and groundwater barrier wall.
Sludge Disposal:	Sludge is temporarily stored in the Sludge Storage Tank, for subsequent disposal at the Copper Cities inactive open pit, Diamond H pit.
Nature of facility discharge:	Remediated groundwater from the water treatment plant.
Average flow per discharge:	Application indicates the average flow per discharge is 1.73 MGD, with an average discharge of 2.015 MGD over the last 12 months.
Continuous or intermittent discharge:	Continuous
<p>In May 1989, ADEQ listed the Pinal Creek Site under the Arizona Water Quality Assurance Revolving Fund (WQARF) program. The WQARF site was created to address groundwater contamination in alluvial aquifers within the Pinal Creek Watershed. In 1990 the "Pinal Creek Group" was formed to investigate and remediate the contamination. Members of the Pinal Creek Group were BHP Copper Inc., Inspiration Consolidated Copper Company, and Freeport-McMoRan Miami, Inc. The Pinal Creek Group conducted interim remedial actions and various assessments required by the WQARF program, including human health and ecological risk assessments in addition to a remediation feasibility study.</p> <p>Human Health and Ecological Risk Assessments (Parametrix, 1993a and 1993b) were conducted to characterize the nature of and potential risk due to the shallow subsurface plume. The risk assessments compiled and evaluated surface water quality data in Pinal Creek and identified aluminum, cobalt, and manganese as pollutants of concern for aquatic life.</p>	

**III. GENERAL FACILITY INFORMATION (CONTINUED)**

In 1997, the PCG finalized the Remediation Feasibility Study report (Hydro Geo Chem, Inc., 1997) and recommended taking remedial action under the WQARF program. The recommended remedial action included capturing the groundwater before it could impact the water quality of Lower Pinal Creek. The remediation was adopted and implemented pursuant to a Consent Decree between the Arizona Department of Environmental Quality, and the PCG and has been in effect since August 13, 1998. In 2009, FMMI assumed full responsibility for operation of the LPCWTP. ADEQ oversees the WQARF remediation, reviews project work plans and designs, and receives monthly progress reports for the Pinal Creek Project. The progress reports contain information on the quantity and quality of water pumped and treated for remediation, and the results of groundwater and surface water monitoring at the Pinal Creek site. Comprehensive monitoring studies are conducted as required by the Consent Decree and various permits obtained to implement the remediation, including the current AZPDES permit.

On April 10, 2014, the Pinal Creek Project received a letter from ADEQ that specified that the groundwater remediation components of the Consent Decree have been constructed and successfully operated for more than a decade. This letter stated that Groundwater Remediation Action Plan developed for the 1998 Consent Decree constitutes a Final Groundwater Remedial Action Plan.

The AZPDES permit will authorize the discharge of treated groundwater water to Pinal Creek. The discharge from the LPCWTP has continuously been below discharge limitations and met all permit requirements since the plant commenced in 1999. Heavy metals are being removed from contaminated groundwater pumped to the LPCWTP. Contaminants of concern include aluminum, beryllium, cadmium, cobalt, copper, iron, lead, manganese, nickel, zinc sulfate, acidity, and dissolved solids.

**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 the facility/outfall is Pinal Creek, tributary to the Salt River. This WOTUS PSW is listed in A.A.C. R18-11 Appendix B.  Pinal Creek is ephemeral above Outfall 001, effluent-dependent from Outfall 001 to See Ranch Crossing, and perennial from See Ranch Crossing to Salt River.
River Basin:	Salt River
Outfall Location(s):	Outfall 001: Township 2N, Range 15E, Section 18  Latitude 33° 31' 56" N, Longitude 110° 52' 14" 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, discharge monitoring data are available. The following is the measured discharge quality reported in the application.

Parameters	Units	Maximum Daily Discharge Concentration
pH	S.U.	8.94
Sulfate	mg/L	1,540
Total Suspended Solids (TSS)	mg/L	<5
Total Dissolved Solids (TSD)	mg/L	1,120

**VI. STATUS OF COMPLIANCE WITH THE EXISTING AZPDES PERMIT**

The LPCWTP operates under ADEQ’s WQARF program. ADEQ oversees the facility under the WQARF program requirements. No permit or operational issues have been reported during the operating history of this plant.

Date of Most Recent Inspection:	8/30/2023; no potential violations were noted as a result of this inspection.
Discharge Monitoring Reports (DMR) Reviewed:	01/2020 through 03/2024
Lab Reports Reviewed:	01/2020 through 03/2024
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.

**VII. PROPOSED PERMIT CHANGES (CONTINUED)**

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

Parameter	Existing Permit	Proposed Permit	Reason for Change
Sufficiently Sensitive Test Methods and Limit of Quantitation (LOQ) Reporting Requirements	Limited explanation of analytical requirements for LOQ and sufficiently sensitive test methods.	Analytical test sensitivity requirements are specified in the footnotes of Part I Tables 1 –2 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).
Toxicity Reduction Evaluation (TRE) Process	Permit conditions detailed in Part IV.D	Permit conditions detailed in Part III.D	Updated permit language clarifies the criteria that cause a facility to enter a TRE process and the criteria that must be met to exit a TRE process.
Special Conditions: Outfall 001 Expanded Effluent Monitoring Reports	Not required	Permittee must submit all Expanded Effluent Monitoring Reports submitted to WQARF to the AZPDES program.	Effluent characterization for inorganic parameters of concern typically present in acid mine drainage must be monitored to calculate reasonable potential for excursion of a water quality standard. See A.R.S. §49-203(A)(8) as well as 40 CFR 2.302, 40 CFR 122.44(d)(1)(iii), 40 CFR 122.43(a), 40 CFR 122.44(i), and 40 CFR 122.48(b), which are incorporated by reference in A.A.C. R18-9-A905(A)(3).

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 discharge 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.

**VII. PROPOSED PERMIT CHANGES (CONTINUED)**

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.

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

**VIII. DETERMINATION OF DISCHARGE LIMITATIONS**

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:** As outlined in 40 CFR Part 133:

No technology-based limitations have been promulgated for Water Treatment Plants. However, the previous permit included technology-based limits for aluminum, cobalt, manganese, and total suspended solids (TSS) based on best professional judgment (BPJ). The limits for aluminum, cobalt, and manganese are based on data generated from the Ecological Risk Assessment conducted by the Pinal Creek Group in 1993. Remedial Action Objectives (RAOs) were established for aluminum, cobalt, and manganese to ensure protection of warm water aquatic life.

For each parameter, daily maximum limits reflect the acute toxicity criteria and the monthly average limits reflect the chronic criteria established for protection of aquatic life. Cobalt and aluminum are not included in the Arizona Water Quality Standards. Although manganese has an Arizona WQS for protection of partial body contact, it is less stringent than the criteria established by the Pinal Creek Group’s RAOs. These limits are maintained in the permit.

**Water Quality-Based Effluent Limitations:**

Per 40 CFR 122.44(d)(1)(ii), (iii) and (iv), effluent 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 discharge 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.

**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 discharge concentration must meet stream standards.

**VIII. DETERMINATION OF DISCHARGE LIMITATIONS (*CONTINUED*)**

**Hardness**

The permittee is required to sample hardness as CaCO<sub>3</sub> 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 400 mg/L (the maximum allowable hardness value) 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.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)(1)(iv).

WET testing for chronic toxicity shall be conducted using the following two surrogate species which were selected for their sensitivity to metals and tolerance for high total dissolved solids (TDS):

- *Daphnia magna* (water flea) – for evaluating toxicity to invertebrates
- *Pimephales promelas* (fathead minnow) – for evaluating toxicity to vertebrates

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 (TUC) for a four-day exposure period. Using this benchmark, the 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 an action level will trigger follow-up testing to determine if discharge toxicity is persistent. If toxicity above an 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 24-hour composite samples be collected for WET testing. 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.

**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.
Total Suspended Solids (TSS)	20 mg/L 30-day average 30 mg/L 7-day average	<5 mg/L	50	N/A	TBEL (BPJ)	Monitoring TSS to be conducted monthly using a composite sample. The sample type required was chosen to be representative of the discharge. At least one sample must coincide with WET testing to aid in the determination of the cause of toxicity, if toxicity is detected.
pH	Minimum: 6.5 Maximum: 9.0 A&Wedw and PBC A.A.C. R18-11-109(B)	Min: 7.11 S.U Max: 8.94 S.U	Continuous	N/A	WQBEL	pH is to be monitored using a discrete sample of the discharge 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	16°C	6	N/A	N/A	Discharge temperature is to be monitored by discrete sample. 40 CFR Part 136 specifies that discrete samples must be collected for temperature.
Total Dissolved Solids (TDS)	No applicable standard	1,120 mg/L	50	N/A	N/A	Monitoring required to provide site-specific water quality.
Aluminum	No applicable surface water quality standard  991 µg/L acute & 243 µg/L chronic  BPJ TBEL based on site specific RAOs	100 µg/L	50	171 µg/L	TBEL (BPJ)	Monitoring required and the technology-based limit remains in the permit.
Antimony	600 µg/L A&Wedw chronic	<2 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.
Arsenic	150 µg/L A&Wedw chronic	<1 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.
Beryllium	5.3 µg/L A&Wedw chronic	<0.3 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.
Cadmium (2)	6.2 µg/L A&Wedw chronic	<0.3 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.
Chromium (Total)	No applicable standard	1.31 µg/L	13	1.6 µg/L	No RP	Monitoring required for Expanded Effluent Monitoring Report.



**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)	
Cobalt	No applicable surface water quality standard 706 µg/L acute & 42 µg/L chronic BPJ TBEL based on site specific RAOs	0.61 µg/L	50	1.10 µg/L	TBEL (BPJ)	Monitoring required and the technology-based limit remains in the permit.	
Copper (2)	29.3 µg/L A&Wedw chronic	<2 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Hardness	No applicable standard. Hardness is used to determine standards for specific metal parameters.	658 mg/L	14	N/A	N/A	A&W standards for cadmium, copper, lead, nickel, silver and zinc used for RP determinations were based on the maximum allowable hardness value of 400 mg/L. Monitoring for hardness is required whenever monitoring for hardness-dependent metals is required.	
Iron	1,000 µg/L A&Wedw chronic	<200 µg/L	12	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Lead (2)	10.9 µg/L A&Wedw chronic	<0.5 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Manganese	130,667 µg/L PBC 8,798 µg/L acute & 3,391 µg/L chronic BPJ TBEL based on site specific RAOs	50 µg/L	50	85.77 µg/L	TBEL (BPJ)	Monitoring required and the technology-based limit remains in the permit.	
Mercury	0.01 µg/L A&Wedw chronic	<1 µg/L	13	N/A	RP Indeterminate (High LOQ)	Monitoring required for Expanded Effluent Monitoring Report.	
Nickel (2)	168 µg/L A&Wedw chronic	<1 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Selenium	2 µg/L A&Wedw chronic	<0.3 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Silver (2)	34.9 µg/L A&Wedw acute	<0.5 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Thallium	75 µg/L PBC	<0.5 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Zinc (2)	379 µg/L A&Wedw acute and chronic	<20 µg/L	13	N/A	No RP	Monitoring required for Expanded Effluent Monitoring Report.	
Whole Effluent Toxicity (WET)	No toxicity (A.A.C. R18-11-108(A))	<i>Pimephales promelas</i>	1.0 TUc	4	N/A	RP Indeterminate	Monitoring required and an action level is set.
		<i>Daphnia magna</i>	1.0 TUc	4	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 for this parameter is based on the maximum allowable hardness value of 400 mg/L.

### 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 discharge limitations. Additionally, monitoring may be required to gather data for future discharge limitations or to monitor discharge 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 purposes of this permit, a "24-hour composite" sample has been defined as a flow-proportioned mixture of not less than three discrete samples (aliquots) obtained at equal time intervals over a 24-hour period. The volume of each aliquot shall be directly proportional to the discharge flow rate at the time of sampling.

These criteria for composite sampling are included in order to obtain samples that are representative of the discharge given the potential variability in the duration, frequency and magnitude of discharges from this facility.

Discrete (i.e., grab) samples are specified in the permit for parameters that for varying reasons are not amenable to compositing.

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

## **XI. SPECIAL CONDITIONS (Part IV in Permit)**

### **Metal Translator Values**

The permittee did not develop metal translators for this permit. If the permittee intends to use metal translators for the next permit cycle, the metal translator values shall be evaluated in year 3 of this permit and the permittee shall report to ADEQ at the time of permit renewal data that demonstrates the consistency and appropriateness of translators used.

### **Outfall 001 Expanded Effluent Monitoring Reports**

The permittee shall submit all Expanded Effluent Monitoring results collected under the WQARF Program at the discharge location specified in the permit to the AZPDES Program. This data will be used to characterize the discharge 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).

### **Permit Reopener**

This permit may be modified based on newly available information; to add conditions or limits to address demonstrated discharge 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 LPCWTP will be to an effluent-dependent water. Except for flows resulting from rain events, the only water in the creek will be the discharge. Therefore, the discharge and the receiving water will normally be one and the same. Further, no new or expanded discharge is being sought as part of this renewal. Discharge 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.

**XIV. ADMINISTRATIVE INFORMATION (CONTINUED)****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: Lesley Davidson  
1110 West Washington Street  
Phoenix, Arizona 85007

Or by contacting Lesley Davidson at (520) 628 – 5018 or by e-mail at [davidson.lesley@azdeq.gov](mailto:davidson.lesley@azdeq.gov).

**XVI. INFORMATION SOURCES**

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

1. AZPDES Permit Application Form(s) 1 and 2E, received July 2, 2024, 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 August 22, 2024, August 30, 2024, and September 9, 2024, December 3, 2024, and December 13, 2024.
3. ADEQ files on Freeport McMoRan Miami – Lower Pinal Creek WTP.
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.

**XVI. INFORMATION SOURCES (CONTINUED)**

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 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.

13. Hydro Geo Chem, Inc. 1997. *Feasibility Study and Recommended Remedial Action*, Pinal Creek WQARK Site, May 1, 1997.

14. Lazorchak, J.M., Smith, M.E., Herrin, L.E., Kneipp A.M. 2001. *A Daphnia magna 4-day Survival and Growth Test Method*. U.S. Environmental Protection Agency, Cincinnati, OH.

15. Parametrix, Inc. 1993a. *Human Health Risk Assessment for Pinal Creek WQARF Site*, Gila County, Arizona. May 1993.

16. Parametrix, Inc. 1993b. *Ecological Risk Assessment for Pinal Creek WQARF Site*, Gila County, Arizona. May 1993.