STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-106172
PLACE ID 138107, LTF 94768
SIGNIFICANT/OTHER/MINOR AMENDMENT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A. A. C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality (ADEQ) hereby authorizes Bonanza Explorations Inc. to operate the Copperstone Mine, an underground gold mine located in an unincorporated area of La Paz County, Arizona, over groundwater of the Parker Groundwater Basin, in Sections 1, 2, 11-14, 22-27, Township 6N, Range 20W of the Gila and Salt River Base Line and Meridian. This permit becomes effective on the date of the Water Quality Division Deputy Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

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

1.1. PERMITTEE INFORMATION

Facility Name:	Copperstone Gold Mine
Facility Address:	Arizona Route 95N, Milepost 121.5 Quartzsite, Arizona 85346
County:	La Paz County
Annual Registration Fee Flow Rate:	736,800 gallons per day (gpd)
Permittee:	Bonanza Explorations Inc.
Permittee Address:	Suite 1601 110 Young St, Toront ON. M5C1T4
Facility Contact:	Sid Tolbert
Emergency Phone No.:	(775) 304-8299
Latitude/Longitude:	32° 52' 00" N/114° 17' 51" W
Legal Description:	Sections 1, 2, 11-14, 22-27, Township 6N, Range 20W of the Gila and Salt River Base Line and Meridian.

1.2. AUTHORIZING SIGNATURE

_____

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

Signed this _____ day of _____, 20_____

THIS AMENDED PERMIT SUPERSEDES ALL PREVIOUS PERMITS

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2.0 SPECIFIC CONDITIONS

[A.R.S. §§ 49-203(4), 49-241(A)]

2.1. FACILITY / SITE DESCRIPTION

[A.R.S. § 49-243(K)(8)]

Bonanza Exploration Inc. (Bonanza) will operate the Copperstone Mine as an underground mining operation. The proposed operations will be within the limits of the previous mine operations by Cyprus Minerals, will not extend onto areas of undisturbed land, and the existing facilities previously operated by Cyprus Minerals will remain closed.

The proposed project will use conventional underground mining techniques and will utilize the existing open decline located near the bottom of the open pit. Ore will be milled then processed in a whole ore leaching process which includes cyanide leach and gold, copper and silver recovery processes conducted completely within tanks. The new Evaporation/Infiltration Basin will receive direct precipitation and water pumped from the underground mine workings recirculating the water between the basin and the mine dewatering operation.

2.1.1. Tailings Storage Facility

The waste slurry produced from the whole ore leaching process is pumped to the lined tailings storage facility (TSF), which is located on the existing waste rock pile in the eastern portion of the Copperstone Mine. The TSF will occupy an area of approximately 35 acres. Phase IA of the TSF is designed with a double-liner with leak collection and recovery system (LCRS), a tailings underdrain system, and a water pool decant pipe. Solutions generated from the decant system, underdrain system, and LCRS shall be conveyed via gravity flow to the recirculation pond.

2.1.2. Recirculation Pond

The recirculation pond (or solution collection pond) receives liquids via gravity flow from the decant system, underdrain system, and LCRS at the TSF. The recirculation pond occupies an area of approximately 1.4 acres.

2.1.3. Ore Stockpile

The ore stockpile is located southwest of the primary and secondary crusher plant and ore/mill processing area. The ore shall be reclaimed by a loader and placed in the crusher as needed. Although the ore has been previously characterized as non-acid forming, samples from the ore stockpile shall be collected and analyzed for acid-base accounting (ABA) at a regular frequency, as specified in Section 4.2, Table 11. If the ore is found to be acid- producing, it shall be processed in the mill as soon as possible, or shall be mixed with ore determined by previous testing to be non-acid producing.

2.1.4. Evaporation/Infiltration Basin

The Evaporation/Infiltration Basin shall be located in an area between the open pit and the tailings storage facility and cover an area of approximately 18.6 acres. The basin shall receive only direct precipitation and water pumped from the underground mine workings for the purpose of dewatering the underground workings.

2.1.5. Waste Rock Disposal Areas

The waste rock disposal areas (Area #1 and Area #2) are located within the existing open pit. The waste rock is generated as part of excavating ramps, stope access, inter-stope access, and stope access slashing. The permanent storage of the waste rock shall be part of the ongoing reclamation at the Copperstone Mine. Previous testing of the waste rock has indicated that it is not acid-generating and produced leachate below AWQS. However, ongoing testing of the waste rock shall be performed as per Section 4.2, Table 10, to confirm no changes in acidic conditions.

The site includes the following permitted discharging facilities:

Table 1: Discharging Facilities

Facility	Latitude	Longitude
Tailing Storage Facility	33º 52’ 21.28.07” N	114º 17’ 20.11.20” W
Recirculation Pond	33º 52’ 12.09” N	114º 17’ 18.96” W
Ore Stockpile	33º 52’ 04.16” N	114º 17’ 52.16” W
Evaporation/Infiltration Basin	33º 52’ 15” N	114º 17’ 35” W
Waste Rock Disposal Area #1	33º 52’ 30.12” N	114º 17’ 59.51” W
Waste Rock Disposal Area #2	33º 52’ 21.25” N	114º 17’ 54.18” W

2.1.6. Annual Registration Fee

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

The annual registration fee for this permit is payable to ADEQ each year. The annual registration fee flow rate is established by the permitted flow rate identified in Section 1.1 Permittee Information. If the facility is

not constructed or is incapable of discharge, the permittee may be eligible for reduced fees pursuant to Table 2 under A.A.C. R18-14-104(A). Send all correspondence requesting reduced fees to the Groundwater Protection and Reuse Section. Please reference the permit number, LTF number, and the reason for requesting reduced fees under this rule.

2.1.7. Financial Capability

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

The Permittee shall be required to demonstrate financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The Permittee shall be required to maintain financial capability throughout the life of the facility. The closure and post-closure costs for the APP discharging facilities are $670,340.00. The financial assurance demonstration is based on a bond held by the Bureau of Land Management (BLM) in the amount of $1,632,049.00, and a financial assurance mechanism demonstrated through a Performance Surety Bond per A.A.C. R18-9-A203(C)(2) in the amount of $137,515.00. Updated closure costs, post-closure costs and the associated financial assurance mechanism shall be provided per the Compliance Schedule, Section 3.1 and 3.2.

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

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

Facilities regulated by this permit shall be designed, constructed, operated, and maintained to meet requirements specified by A.R.S. §49-243(B) and A.A.C. R18-9-A202(A)(5).

2.2.1. Engineering Design

The BADCT demonstrations for the existing facilities at the site were previously approved and will not change in Section 4.1, Table 8. The discharge from the new whole ore leach process will be treated prior to discharge to the tailings impoundment to decrease the sodium cyanide (NaCN) concentration to no more than 50 ppm. The high density polyethylene (HDPE) liner material used to construct the tailings impoundment is compatible with NaCN.Site-Specific Characteristics

2.2.2. Site-Specific Characteristics

The passive containment created by the existing open pit at the Copperstone Mine is used as an integral part of BADCT for Waste Rock Disposal Areas #1 and #2.

2.2.3. Pre-Operational Requirements

Not applicable

2.2.4. Operational Requirements

At a minimum, permitted facilities shall be inspected for performance levels listed in Section 4.2, Table 9. Results of these inspections shall be documented and maintained on location for at least 10 years from the date of each inspection, as required by Section 2.7.2 of this permit. If damage is identified during an inspection that could cause or contribute to a discharge, proper repairs shall be promptly performed and documented as described in Section 2.5.2 and Section 2.7.2.

2.3. DISCHARGE LIMITATIONS

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

The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of BADCT pollutant control technologies, including liner failure, uncontrollable leakage, overtopping (e.g., exceeding maximum storage capacity, defined as fluid level exceeding the crest elevation of a permitted impoundment), dam or berm breaches that result in an unexpected loss of fluid, accidental spills, or other unauthorized discharges.

2.3.1. Process solution ponds

The permittee is restricted to no discharge from the TSF, ore stockpile, and mill area sumps

2.3.2. Ore Stockpile

Runoff from the ore stockpile shall be contained by the downstream brm that surrounds the mill area. Ore stockpile monitoring shall be conducted in accordance with section 4.2, Tables 4.1.1 and 4.2.3.

2.3.3. Evaporation/Infiltration Basin

Discharge to the evaporation/infiltration basin shall be limited to mine dewatering water.

2.4. POINT OF COMPLIANCE (POC)

[A.R.S. § 49-244]

The POCs are established by the following monitoring locations:

Table 2: Points of Compliance

POC #	POC Location	ADWR Registration Number	Latitude	Longitude	Screen Interval
Current[1]					
POC-1	Approximately 1400 ft. south of the proposed infiltration basin	55-221264	33° 51' 55.62" N	114° 17' 44.39" W	520-550 ft. bgs
POC-2	Approximately 1100 ft. SE of the proposed infiltration basin	55-221265	33° 52' 07.40" N	114° 17' 23.78" W	520-550 ft. bgs
New					
18-18A-01	Approximately 800 ft North of waste rock disposal area #1	None	33° 52’ 39.811” N	114° 17’ 57.621” W	None; Open Borehole

1 – Wells POC-1 and POC-2 will be removed upon completion of ambient groundwater monitoring at 18-18A-01 and calculation of ALs and AQLs.

Groundwater monitoring is required under this permit at POC-1, POC-2, and 18-18A-01. Monitoring requirements for POCs are listed in Section 4.2, Tables 12 through 17. The Director may amend this permit to designate an additional point or points of compliance if information on groundwater gradient or groundwater usage indicates the need.

The Director may amend this permit to designate additional POCs, if information on groundwater gradients or groundwater usage indicates the need.

2.5. MONITORING REQUIREMENTS

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

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

2.5.1. Pre-Operational Monitoring

Not Applicable

2.5.2. Discharge Monitoring

2.5.2.1. Waste Rock Monitoring

Waste rock from mining activities shall be sampled and analyzed at a frequency of one composite sample per month for the specific analytical methods listed in Section 4.2, Table 10 of this permit. The results shall be reported according to the terms specified in Section 2.7.4.2.

2.5.2.2. Ore Stockpile Monitoring

Material from the ore stockpile shall be sampled and analyzed at a frequency of one composite sample per every 25,000 tons or monthly, whichever is more frequent, for the specific analytical methods listed in Section 4.2, Table 11 of this permit. The composite sample shall be comprised of discrete samples that are collected as split samples from Copperstone's daily mill feed material sampling. The results shall be reported according to the terms specified in Section 2.7.4.3.

2.5.3. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 9.

If any damage of the pollution control structures is identified during inspection that could cause or contribute to a discharge, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2.

2.5.4. Groundwater Monitoring and Sampling Protocols

Groundwater monitoring is required at POC wells POC-1 and POC-2 and new POC well 18-18A-01 under the terms of this permit per Section 4.2, Tables 12 through 17.

Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80 percent of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the SMRF.

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

2.5.4.1. POC Well Replacement

In the event that one or more of the designated POC wells should become unusable or inaccessible due to damage or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is 50 feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well. However, if the permittee can provide a technical demonstration that the original ALs and AQLs are not appropriate for the replacement well ADEQ may review and consider recalculation of the ALs and AQLs. Otherwise, the ALs and/or AQLs shall be set following the provisions in Section 2.5.4.3 Alert Levels for Point of Compliance Wells and Section 2.5.4.4 Aquifer Quality Limits for POC Wells.

2.5.4.2. Ambient Groundwater Quality Monitoring for POC Wells

In accordance with CSI #3.3 in Section 3.0: Compliance Schedule, the permittee shall complete eight monthly rounds of ambient groundwater monitoring for POC well 18-18A-01 for all constituents listed in Tables 16 and 17.

2.5.4.3. Alert Levels for POC Wells

ALs shall be calculated for all contaminants with an established numeric AWQS for each of the POC wells per CSI No. 3.4. For any new or replacement POC wells, ALs shall be calculated for all contaminants with an established numeric AWQS, as described below.

As per the CSI No. 3.4, following receipt of the laboratory analyses for the final month of the ambient groundwater monitoring period for each POC well referenced in Section 4.2, Tables 16 and 17, the permittee shall submit the ambient groundwater data in tabulated form to the Groundwater Protection and Reuse Section for review. Copies of all laboratory analytical reports, field notes, and the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analyses of the samples for all parameters listed in Section 4.2, Tables 16 and 17, to be established for each POC well, shall be submitted to the Groundwater Protection and Reuse Section. The permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by ADEQ, or the permittee may defer calculation of the ALs and AQLs by the Groundwater Protection and Reuse Section. The ALs shall be established and calculated by the following formula, or another valid statistical method submitted to Groundwater Protection and Reuse Section in writing and approved for this permit by the Groundwater Protection and Reuse Section:

$AL = M + KS$

Where M = mean, S = standard deviation, and K = one-sided normal tolerance interval with a 95% confidence level (Lieberman, G.J. (1958) Tables for One-sided Statistical Tolerance Limits: Industrial Quality Control, Vol XIV, No. 10). Obvious outliers should be excluded from the data used in the AL calculation.

The following criteria shall be met in establishing ALs in the permit:

1. The AL shall be calculated for a parameter using the analyses from a minimum of eight sample events.
2. Any data where the laboratory Practical Quantitation Limit (PQL) exceeds 80% of the AWQS shall not be included in the AL calculation.
3. If a parameter is below the detection limit, the permittee must report the value as “less than” the numeric value for the PQL or detection limit for the parameter, not just as “non-detect”. For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
4. If the analytical results from more than 50% of the samples for a specific parameter are non-detect, then the AL shall be set at 80% of the AWQS.
5. If the calculated AL for a specific constituent and well is less than 80% of the AWQS, the AL shall be set at 80% of the AWQS for that constituent in that well.

2.5.4.4. Aquifer Quality Limits for POC Wells

For each of the monitored analytes for which a numeric AWQS has been adopted, the AQL shall be established as follows:

1. If the calculated AL is less than the AWQS, then the AQL shall be set equal to the AWQS.
2. If the calculated AL is greater than the AWQS, then the AQL shall be set equal to the calculated AL value, and no AL shall be set for that constituent at that monitoring point

2.5.4.5. Compliance Groundwater Quality Monitoring for POC Wells

Quarterly compliance groundwater monitoring in each POC well shall commence within the first calendar quarter after completion of the ambient groundwater sampling period. For quarterly compliance monitoring, the permittee shall analyze groundwater samples for the parameters listed in Section 4.2, Tables 12 through 17. In addition to quarterly compliance groundwater monitoring, an extended parameter list shall be analyzed at semi-annual and/or biennial frequency based on the listed monitoring frequency in Tables 12 through 17. The first biennial sampling event for the new POC well shall commence within 90 days of completion of ambient groundwater monitoring. Biennial sampling shall occur every two years thereafter.

2.5.5. Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required under the terms of this permit.

2.5.6. Analytical Methodology

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

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

2.5.7. Installation and Maintenance of Monitoring Equipment

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

2.6. CONTINGENCY PLAN REQUIREMENTS

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

2.6.1. General Contingency Plan Requirements

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

Any AL exceedance, or violation of an AQL, DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3 Permit Violation and Alert Level Status Reporting, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first

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

2.6.2. Exceeding of Alert Levels and Performance Levels

2.6.2.1. Performance Levels Set for Freeboard

In the event that freeboard performance levels established in Section 4.2, Table 9 in a surface impoundment are not maintained, the permittee shall:

1. As soon as practicable, cease or reduce discharging to the impoundment to prevent overtopping. Remove and properly dispose or recycle to other operations the excess fluid in the reservoir until the water level is restored at or below the freeboard performance level.
2. Within 5 days of discovery, evaluate the cause of the incident and adjust operational conditions or identify design improvements to the affected system as necessary to avoid future occurrences.
3. Within 30 days of discovery, initiate repairs to the affected system, structure, or other component as necessary to return the system to the established performance levels. Record any repair procedures, methods, and materials used to restore the facility to operating condition in the facility log/recordkeeping file according to Section 2.7.2 (Operational Inspection/Log Book Recordkeeping).
4. If design improvements are necessary and if they trigger a permit amendment, submit an amendment application within 90 days of discovery.
5. The facility is no longer on alert status once the operational indicator no longer indicates that the freeboard performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2. Performance Levels, other than Freeboard

1. If an operational performance level (PL) listed in Section 4.2, Table 9 has not been maintained during required inspection and operational monitoring, such that the result is reasonably likely to cause or contribute to an unauthorized discharge pursuant to A.R.S. § 49-201(12), the permittee shall investigate to determine the cause of the condition within 24 hours, or as soon as practicable. The investigation shall include the following:
    a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the operational performance condition.
    b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences.
2. The PL exceedance, results of the investigation, and any corrective action taken shall be reported to the Groundwater Protection and Reuse Section, within 30 days of the discovery of the condition. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.

3. Within 30 days, the permittee shall initiate actions identified in the contingency plan referenced in Section 2.6.1 General Contingency Plan Requirements and any necessary contingency measures to resolve problems identified by the investigation which may have led to a PL being exceeded. To implement any other corrective action the permittee may choose to obtain prior approval from ADEQ according to Section 2.6.6 Corrective Actions.

2.6.2.3. Exceedance of Alert Level #1 for Normal Liner Leakage

If an Alert Level #1 (AL #1) as specified in Section 4.2, Table 18, has been exceeded, the permittee shall take the following actions:

NOTE: The notification and reporting identified in this section is in lieu of the reporting requirement in Section 2.7.3 Permit Violation and Alert Level Status Reporting.

1. Within 5 days of AL #1 exceedance, notify Groundwater Protection and Reuse Section in accordance with Section 2.7.3 Permit Violation and Alert Level Status Reporting. Continue monitoring to determine if the leakage rate is increasing.
2. If the leakage rate continues to exceed AL#1 for 15 days following notification of initial AL #1 exceedance, perform a visual inspection of the liner above the solution level, to determine the location of the leaks in the primary liner.
3. Within 45 days of AL #1 exceedance, if liner damage is evident, the permittee shall complete liner repairs.
4. Within 45 days of AL #1 exceedance, if the visual inspection does not identify the location of leaks, formulate a corrective action plan to determine their location and repair them.
5. Within 90 days of AL #1 exceedance and following formulation of a corrective action plan, the permittee shall complete liner repairs.
6. Within 75 days of AL #1 exceedance (if repairs were completed in Step 3), or 120 days of AL #1 exceedance (if corrective action plan was implemented per Steps 4 and 5), if no alert level exceedance is observed for 30 consecutive days, notify Groundwater Protection and Reuse Section and document assessment and/or repairs in the log book.
7. Within 120 days of AL #1 exceedance (if repairs were completed in Step 3), or 165 days of AL #1 exceedance (if corrective action plan was implemented per Steps 4 and 5), if 30 consecutive days without an AL #1 exceedance is not achieved, notify Groundwater Protection and Reuse Section and reassess the entire liner system and complete any necessary repairs as described in Steps 2 and 3 (and if necessary Steps 4 and 5 also). Repeat the assessment and liner repair cycle until requirements of Step No. 6 are attained.
8. A liner leakage assessment and repair report shall be included in the next annual report described in Section 2.7.4.1 Annual Report of this permit. The permittee may also submit the liner leakage assessment report to the ADEQ prior to the annual report due date. This liner leakage assessment and repair report shall be submitted to Groundwater Protection and Reuse Section. Upon review of the report, ADEQ may require that the permittee take additional corrective actions to address the problems identified from the assessment of the liner and perform other applicable repair procedures.

2.6.2.4. Exceedance of Alert Level #2 for Liner Failure or Rips

If the Liner Leakage Discharge Limit (AL #2) specified in Section 4.2, Table 18, has been exceeded, the permittee shall:

NOTE: The notification and reporting identified in this section is in lieu of the reporting requirement in Section 2.7.3 Permit Violation and Alert Level Status Reporting.

1. As soon as practicable, cease all discharge to the impoundment, implement control measures to prevent new solution buildup that may subsequently report to the impoundment, and notify Groundwater Protection and Reuse Section of the AL #2 exceedance within 24 hours of discovering the AL #2 exceedance, or as soon as practicable.
2. Within 15 days of initial AL #2 exceedance, perform a visual inspection of the liner above the solution level to identify the location of the leak(s). The permittee shall complete liner repairs and discharge to the impoundment shall not be re-initiated until the leak(s) have been identified and repaired.
3. Within 60 days of initial AL #2 exceedance if leaks were found and fixed and if no AL #2 exceedance is observed for 30 consecutive days, submit a liner leakage assessment and repair report to ADEQ. The report shall include the results of the initial liner evaluation, methods used to locate the leak(s), repair procedures and quality assurance/quality control implemented to restore the liner to optimal operational status, and other information necessary to ensure the future occurrence of the incidence will be minimized.
4. Within 30 days of initial AL #2 exceedance if the visual inspection does not identify the location of leaks and AL #2 exceedance continues, formulate a corrective action plan to determine their location and repair them. The corrective action plan will take into account the schedule for a 3rd party contractor to perform electronic leak detection or other methods if required.
5. Within 75 days of initial AL #2 exceedance and following formulation of a corrective action plan, the permittee shall complete liner repairs
6. Within 105 days of AL #2 exceedance and implementation of the corrective action plan per Steps 4 and 5, if no AL #2 exceedance is observed for 30 consecutive days, notify Groundwater Protection and Reuse Section and document assessment and/or repairs in the log book.
7. Within 105 days of initial AL #2 exceedance, (if repairs were completed in Step 3), or 150 days of AL #2 exceedance (if corrective action plan was implemented per Steps 4, 5, and 6) if 30 consecutive days without an AL #2 exceedance is not achieved, repeat Steps 1 through 7 until AL #2 is not exceeded for 30 consecutive days. When the Steps 1 through 7 are repeated, the notification date is reset. Discharge to the impoundment shall not be re-initiated until the leak(s) have been identified and repaired.
8. Liner leakage assessment and repair reports required by Section 2.6.2.2 Exceedance of Alert Level #1 for Normal Liner Leakage, shall be referenced in the next annual report described in Section 2.7.4.1 Annual Report of this permit.

2.6.2.5. Exceeding of Alert Levels Set for Discharge Monitoring

Not applicable.

2.6.2.6. Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.6.1. Alert Levels for Indicator Parameters

If an AL for TDS or sulfate in Section 4.2 Tables 12 through 17 has been exceeded, the Permittee shall request that the laboratory verify the sample results within five (5) days of becoming aware of an AL exceedance. If the analysis does not confirm that an exceedance has occurred the permittee may assume there has been no exceedance and no further action is required.

1. Within five (5) days after receiving laboratory confirmation of an AL for TDS or sulfate being exceeded, the permittee shall notify the Groundwater Protection Value Stream and submit written confirmation within 30 days of receiving the laboratory confirmation of an AL exceedance.
2. If the results indicate an exceedance of an AL for TDS or sulfate, the permittee shall conduct a verification sample of groundwater from the well within 15 days from laboratory confirmation. If the verification sample does not confirm that an exceedance has occurred, the permittee shall notify the Groundwater Protection Value Stream of the results and assume there has been no exceedance. No further action is required under this subsection.
3. If verification sampling confirms that the AL for TDS or sulfate has been exceeded, the permittee shall increase the frequency of monitoring to monthly and analyze for the entire list of parameters listed in Section 4.2, Tables 12 through 17. In addition, the permittee shall immediately investigate the cause of the exceedance and report the results of the investigation with the 30-day confirmation noted above. ADEQ may require additional investigations, the installation of additional wells or corrective action in response to the report. The permittee shall continue monthly testing for the parameter(s) until the parameter(s) has remained below the AL for three consecutive monthly sampling events.

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

1. If an AL for a pollutant set in Section 4.2, Tables 12 through 17 has been exceeded, the Permittee may conduct verification sampling of the pollutant(s) that exceed their respective AL(s) within five (5) days of becoming aware of an AL exceedance. The permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling confirms the AL exceedance or if the Permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring of the pollutant(s) that exceed their respective AL(s) to monthly. In addition, the permittee shall immediately initiate an investigation of the cause of the AL exceedance, including inspection of all discharging units and all related pollution control devices, review of any operational and maintenance practices that might have resulted in an unexpected discharge, and hydrologic review of groundwater conditions including upgradient water quality.
3. The Permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Protection Value Stream, that although an AL is exceeded, the pollutant(s) that exceed their respective AL(s) are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency, for those pollutant(s) that exceed their respective AL(s), for approval in writing by the Groundwater Protection Value Stream.
4. Within 30 days after confirmation of an AL exceedance for those pollutant(s), the permittee shall submit the laboratory results to the Groundwater Protection Value Stream along with a summary of the findings of the investigation, the cause of the AL exceedance, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.
6. The increased monitoring for those pollutant(s), required as a result of ALs exceedance may be reduced to the frequency shown for groundwater monitoring in Section 4.2, Tables 12 through 17, if the results of three (3) consecutive monthly sampling events demonstrate that parameter(s) does/do not exceed their respective AL(s).
7. If the increased monitoring required as a result of an AL exceedance for those pollutant(s), continues for more than six (6) sequential sampling events, the Permittee shall submit a second (2nd) report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth (6th) sampling event.

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

Not applicable

2.6.2.6.4. Alert Level for Groundwater Level

Not Applicable

2.6.3. Discharge Limit Violation

2.6.3.1. Surface Impoundments: Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid for reasons other than Overtopping

In the event of liner failure, containment structure failure, or unexpected loss of fluid such that TSF, Recirculation Pond, or the Evaporation/Infiltration Basin fluids are discharged to the ground surface or to the vadose zone, the permittee shall take the following actions:

1. As soon as practicable, cease all discharges as necessary to prevent any further releases to the environment, including removal of any fluid remaining in the impoundment as necessary, and capture and containment of all escaped fluids.

2. Within 24 hours of discovery, notify Groundwater Protection and Reuse Section.

3. Within five (5) days of discovery of a failure estimate the quantity released, collect representative samples of the fluid remaining in affected impoundments and drainage structures, analyze sample(s) according to Section 4.3, Table 19 and report in accordance with Section 2.7.3 (Permit Violation and AL Status Reporting). In the 30-day report required under Section 2.7.3, include a copy of the analytical results and forward the report to Groundwater Protection and Reuse Section.

4. Within 15 days of discovery, initiate an evaluation to determine the cause for the incident. Identify the circumstances that resulted in the failure and assess the condition of the discharging facility and liner system. Implement corrective actions as necessary to resolve the problems identified in the evaluation. Initiate repairs to any failed liner, system, structure, or other component as needed to restore proper functioning of the discharging facility. The permittee shall not resume discharge to the facility until repairs of any failed liner or structure are performed.

   Repair procedures, methods, and materials used to restore the system(s) to proper operating condition shall be described in the facility log/recordkeeping file and available for ADEQ review. Record in the facility log/recordkeeping file the amount of fluid released, a description of any removal method and volume of any fluid removed from the impoundment and/or captured from the release area. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 Operation Inspection / Log Book Recordkeeping.

5. As soon as practicable, remove fluid remaining in the surface impoundment as necessary to prevent further releases to the subsurface and/or to perform repairs. Record in the facility log/recordkeeping file the amount of fluid removed a description of the removal method, and other disposal arrangements. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection / Log/Recordkeeping File).

6. Within 30 days of discovery of the incident, submit a report to Groundwater Protection and Reuse Section as specified in Section 2.7.3 Permit Violation and Alert Level Status Reporting. Include a description of the actions performed in Subsections 1 through 4 list ed above. Upon review of the report, ADEQ may request additional monitoring or remedial actions.

7. Within 60 days of discovery, assess the impacts to soil and/or groundwater resulting from the incident. If soil or groundwater is impacted such that it could or did cause or contribute to an exceedance of an AQL at the applicable point of compliance, submit to ADEQ, for approval, a corrective action plan to address such impacts, including identification of remedial actions and a schedule for completion of activities. At the approval of ADEQ, the permittee shall implement the approved plan.

8. Within 30 days of completion of corrective actions, submit to Groundwater Protection and Reuse Section, a written report as specified in Section 2.6.6 Corrective Actions.

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

2.6.3.2. Overtopping of a Surface Impoundment

If overtopping of fluid from a permitted surface impoundment occurs, and results in a discharge pursuant to A.R.S. § 49-201(12), the permittee shall:

1. As soon as practicable, cease all discharges to the surface impoundment to prevent any further releases to the environment.
2. Within 24 hours of discovery, notify Groundwater Protection Value Stream.
3. Within five (5) days, collect representative samples of the fluid contained in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.3, Table 19. Within 30 days of the incident, submit a copy of the analytical results to Groundwater Protection Value Stream.
4. As soon as practicable, remove and properly dispose of excess water in the impoundment until the water level is restored at or below the appropriate freeboard as described in Section 4.2, Table 9. Record in the facility log/recordkeeping file the amount of fluid released, a description of the removal method and volume of any fluid removed from the impoundment and/or captured from the release area. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection/LogBook/Recordkeeping File).
5. Within 30 days of discovery, evaluate the cause of the overtopping and identify the circumstances that resulted in the incident. Implement corrective actions and adjust operational conditions as necessary to resolve the problems identified in the evaluation. Repair any systems as necessary to prevent future occurrences of overtopping.
6. Within 30 days of discovery of overtopping, submit a report to Groundwater Protection Value Stream as specified in Section 2.7.3(2) (Permit Violation and Alert Level Status Reporting). Include a description of the actions performed in Subsections 1 through 5 listed above. Upon review of the report, Groundwater Protection Value Stream may request additional monitoring or remedial actions.
7. Within 60 days of discovery, and based on sampling in Item No. 3 above, conduct an assessment of the impacts to the subsoil and/or groundwater resulting from the incident.
8. If soil or groundwater is impacted such that it could cause or contribute to an exceedance of an AQL at the applicable point of compliance, submit to Groundwater Protection Value Stream for approval, a corrective action plan to address such impacts, including identification of remedial actions and/or monitoring, and a schedule for completion of activities. At the direction of Groundwater Protection Value Stream, the permittee shall implement the approved plan.
9. Within 30 days of completion of corrective actions, submit to Groundwater Protection Value Stream, a written report as specified in Section 2.6.6 (Corrective Actions). Upon review of the report, Groundwater Protection Value Stream may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.3.3. Inflows of Unexpected Materials to a Surface Impoundment

The types of materials that are expected to be placed in the permitted surface impoundments are specified in Section 2.3 Discharge Limitations. If any unexpected materials flow to a permitted surface impoundment, the permittee shall:

1. As soon as practicable, cease all unexpected inflows to the surface impoundment(s).
2. Within 24-hours of discovery, notify Groundwater Protection and Reuse Section.

3. Within 5 days of the incident, identify the source of the material and determine the cause for the inflow. Characterize the unexpected material and contents of the affected impoundment, and evaluate the volume and concentration of the material to determine if it is compatible with the surface impoundment liner. Based on the evaluation of the incident, repair any systems or equipment and/or adjust operations, as necessary to prevent future occurrences of inflows of unexpected materials.

4. Within 30 days of an inflow of unexpected materials, submit a report to ADEQ as specified in Section 2.7.3(2) Permit Violation and Alert Level Status Reporting. Include a description of the actions performed in Subsections 1 through 3 listed above.

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

2.6.4. Aquifer Quality Limit Exceedances

1. If an AQL set in Section 4.2 Tables 12 through 17 has been exceeded, the permittee may conduct verification sampling for those pollutant(s) that were above their respective AQL(s) within five (5) days of becoming aware of the AQL exceedance. The permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.

2. If verification sampling confirms that the AQL is violated for those pollutant(s) that were above their respective AQL(s) or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring for those pollutant(s) that were above their respective AQL(s) to monthly. In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.

   The permittee also shall submit a report according to Section 2.7.3(2), which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. A verified exceedance of an AQL will be considered a violation unless the permittee demonstrates within 90 days or a longer time period if agreed to by Groundwater Protection Value Stream that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, the permittee shall consider and Groundwater Protection Value Stream may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in the Groundwater Protection Value Stream approved contingency plan, or separately approved according to Section 2.6.6.

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

4. The permittee shall notify any downstream or downgradient users who may be directly affected by the discharge.

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[A.R.S. § 49-201(12) AND PURSUANT TO A.R.S. § 49-241]

2.6.5.1. Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to

A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2. Discharge of Hazardous Substances or Toxic Pollutants

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

2.6.5.3. Discharge of Non-Hazardous Materials

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

2.6.5.4. Reporting Requirements

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

2.6.6. Corrective Actions

Specific contingency measures identified in Section 2.6 Contingency Plan Requirements have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges, the permittee shall obtain written approval from the Groundwater Protection and Reuse Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, AQL, DL, or other permit condition:

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

Within 30 days of completion of any corrective action not specified in Sections 2.6.1 through Section 2.6.5, the operator shall submit to the Groundwater Protection and Reuse Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7. REPORTING AND RECORDKEEPING REQUIREMENTS

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

2.7.1. Self-Monitoring Report Form

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) provided by ADEQ, and submit the completed report through the myDEQ online reporting system. The permittee shall use the format devised by ADEQ.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter "not required" on the form, include an explanation.
3. The tables contained in Section 4.2 list the monitoring parameters and the frequencies for reporting results on the SMRF:
    a. Tables 12 & 13 Groundwater Monitoring for current POC well (POC-1)
    b. Tables 14 & 15 Groundwater Monitoring for current POC well (POC-2)
    c. Tables 16 & 17 Groundwater Monitoring for 18-18A-01
4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an alert level (AL) or violation of an Aquifer Quality Limit (AQL), discharge limit (DL), or any other permit condition being reported in the current reporting period.

The parameters listed in the above-identified tables from Section 4.2 are the only parameters for which SMRF reporting is required.

2.7.2. Operation Inspection / Log Book Recordkeeping

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

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book.

Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection and Reuse Section within 5 days (except as provided in Section 2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges) of becoming aware of an AL exceedance, or violation of any permit condition, AQL, or DL for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
2. The permittee shall submit a written report to the Groundwater Protection and Reuse Section within 30 days of becoming aware of the violation of any permit condition, AQL, or DL. The report shall

document all of the following:

a. Identification and description of the permit condition for which there has been a violation and a description of the cause;

b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;

c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;

d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;

e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and

f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2 Table 9: Facility Inspection and Operating Requirements in the facility log book as per Section 2.7.2 Operation Inspection / Log Book Recordkeeping.

2.7.4.1. Annual Report

If an Alert Level #1 or Alert Level #2 has been exceeded as discussed in Sections 2.6.2.3 and 2.6.2.4, the permittee shall submit an annual report that summarizes the results of the liner assessment. The Liner Leakage Assessment Report shall also include information including but not limited to the following: number and location of holes identified; a table summarizing the exceedances including the frequency and quantity of fluid removed, and corrective actions taken.

When required the annual report is to be submitted by January 30 of each year to cover activities from January 1 through December 31st of the previous year, consistent with Section 2.7.6.

2.7.4.2. Waste Rock Monitoring Report

The permittee shall submit a waste rock characterization/monitoring report annually to the Groundwater Protection and Reuse Section, from the disposal areas (Area #1 and Area #2) located within the existing open pit. The report shall confirm that the waste rock is not acid-generating and produces leachate below AWQS. Waste rock from mining activities shall be sampled and analyzed at a frequency of one composite sample per month for the specific analytical methods listed in Section 4.2, Table 10 of this permit and reported in accordance with Section 2.7.6.

The report shall include copies of all laboratory analytical reports, field notes, the QA/QC limits used in collection and analysis of the samples

2.7.4.3. Ore Stockpile Monitoring Report

The permittee shall submit an ore stockpile characterization/monitoring report annually to the Groundwater Protection and Reuse Section. The report shall confirm that the ore stockpile is not acid-generating. The composite sample shall be comprised of discrete samples that are collected as split samples from Copperstone's daily mill feed material and shall be sampled and analyzed at a frequency of one composite sample per every 25,000 tons or monthly, whichever is more frequent, for the specific analytical methods listed in Section 4.2, Table 11 of this permit and reported in accordance with Section 2.7.6.

The report shall include copies of all laboratory analytical reports, field notes, the QA/QC limits used in collection and analysis of the samples.

2.7.5. Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq. Contact at 602-771-4571 for any inquiry related to the SMRFs.

5-day and 30-day contingency notification and reports, laboratory reports, and verification sampling results required by this permit should be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq.

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

The Arizona Department of Environmental Quality
Groundwater Protection and Reuse Section
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6. Reporting Deadline

The following table lists the quarterly SMRF report due dates:

Table 3: Quarterly SMRF Reporting Deadlines	
Monitoring Conducted During Quarter:	**Quarterly Report Due By:**
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

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

Table 4: (Semi-)Annual SMRF Reporting Deadlines	
Monitoring Conducted:	**Report Due By:**
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

The following table lists the biennial SMRF due date:

Table 5: Biennial SMRF Reporting Deadlines	
Monitoring conducted during biennial period:	**Biennial Report due by:**
January-December of the following year	January 30, 2025, and every two years thereafter

The following table lists the due date for the annual report per Section 2.7.4.1, 2.7.4.2, and 2.7.4.3:

Table 6: Annual Report Deadlines	
Monitoring conducted during biennial period:	**Annual Report due by:**
January-December of the following year	April 30, 2025, every year thereafter

2.7.7. Changes to Facility Information in Section 1.0

The Groundwater Protection and Reuse Section shall be notified within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, or Emergency Telephone Number.

2.8. Temporary Cessation

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

The permittee shall give written notice to the Groundwater Protection and Reuse Section before ceasing operation of the facility for a period of 60 days or greater. The permittee shall implement the following action(s) upon initiation of temporary cessation.

At the time of notification, the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Following ADEQ approval, the permittee shall promptly implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Groundwater Protection and Reuse Section of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 Closure below. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report "temporary cessation" in the comment section.

2.9. Closure

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

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection and Reuse Section of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report "closure in process" in the comment section.

2.9.1. Closure Plan

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

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

2.9.2. Closure Completion

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

1. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;

2. Further action is necessary to keep the facility in compliance with the AWQS at the applicable POC or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
3. Activities are necessary to verify that actions or ocntrols specified as closure requirements is an approved closure plan or strategy are routinely inspected or maintained;
4. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(36) and Title 49, Chapter 2, Article 3;
5. Further action is necessary to meet property use restrictions.
6. SMRF submittals are still required until Clean Closure is issued.

2.10. Post-Closure

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

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

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Protection and Reuse Section a post-closure plan that addresses post-closure maintenance and monitoring actions at the facility. The post-closure plan shall meet all requirements of A.R.S. §§ 49-201(36) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

2.10.1. Post-Closure Plan

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

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

2.10.2. Post-Closure Completion

The permittee shall notify the Groundwater Protection Value Stream in writing when post-closure activities have been completed. Upon completion of post-closure activities the permittee shall submit a report to the Groundwater Protection Value Stream summarizing the results of all post-closure activities in the approved post-closure plan including maintenance and monitoring. The report should detail whether additional post-closure monitoring is needed or no further monitoring is needed and all closure requirements have been met.

3.0 COMPLIANCE SCHEDULE

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

Unless otherwise indicated, for each compliance schedule item listed below, the permittee shall submit the required information to the Groundwater Protection and Reuse Section.

NOTE: Arizona law requires that engineering and geological documents such as cost estimates, drawings, specifications, maps, plans, and reports be signed and sealed by an Arizona registered professional engineer or an Arizona registered geologist, pursuant to the Arizona Board of Technical Registration statutes, unless a statutory exclusion or exemption applies. See A.R.S. § 32-101 to -152; A.A.C. R4-30-101 to -306.

Table 7: Compliance Schedule Items

No.	Description	Due By:	Permit Amendment Required?
3.1	The financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.0, No. 2 below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs, and discharging facilities have not been added. The demonstration shall also include information in support of a performance surety bond as required in A.A.C. R18-9-A203(C)(2).	October 31, 2025 and every 6 years thereafter; for the duration of the permit.	No
3.2	The permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a, and an updated financial assurance demonstration for the updated cost estimate as per A.A.C. R18-9-A203(C)(2).	October 31, 2025 and every 6 years thereafter; for the duration of the permit.	Yes
3.3	The permittee shall initiate eight (8) rounds of monthly ambient groundwater quality monitoring for POC wells per section 4.2, Tables 16 & 17	Within 30 days of permit issuance	No
3.4	The permittee shall submit an APP amendment application and an ambient groundwater monitoring report to establish ALs and AQLs for POC well 18-18A-01. The report shall include information described in section 2.5.4.3 and be sealed by an Arizona Registered Geologist or other qualified registrant.	Within 90 days of receipt of all ambient groundwater monitoring laboratory data.	Yes (Minor Amendment)
3.5	The permittee shall begin compliance groundwater monitoring of POC 18-18A-01 as required under Section 4.2, Tables 16 & 17.	First quarter after ALs and AQLs have been established	No

4.0 TABLES OF MONITORING REQUIREMTS and BADCT DEMONSTRATIONS

4.1. Facility Design Information

Table 8: Permitted Facilities and BADCT
Non-contact stormwater shall be diverted around the ore stockpile area to the north, where it is backed by a natural hill/wall and an access road constructed on the crest of the hill/wall. These features shall serve as a berm to prevent run-off on the back side of the ore stockpile and mill processing areas. Contact stormwater attributed to precipitation shall be contained in the bermed stockpile area for localized evaporation and infiltration.
Evaporation/Infiltration Basin: The Evaporation/Infiltration Basin shall be located in an area between the open pit and the tailings storage facility and cover an area of approximately 18.6 acres. A berm ranging in height from approximately 3 feet to 46 feet high, comprised of native soil and waste rock, shall surround the perimeter of the basin. The basin shall receive only direct precipitation and water pumped from the underground mine workings for the purpose of dewatering the underground workings. The mine dewatering water has been characterized and meets applicability Aquifer Water Quality Standards (AWQSs) for all metals except for fluoride which appears to be naturally occurring in groundwater in this area in concentrations above the AWQS of 4.0 mg/l. Results of organic analysis for mine dewatering water samples were all below laboratory detection limits. The concentration of fluoride for mine dewatering samples averages 5.8 mg/l (5.7, 5.5, 6.3 mg/l). For comparison, the AQLs for POC wells are based on ambient monitoring and are set higher than the fluoride AWQS (POC 1, 6.3 mg/l; POC 2, 5.5 mg/l). The mine dewatering operation is adjacent to the location of the infiltration basin and modeling indicates that a cone of depression extends to the area of the basin. Therefore, infiltrating water is expected to return to the dewatered area creating a recirculating pattern. Because of the high infiltration rates, the concentration of fluoride should not significantly increase due to evaporation. After dewatering activities have ceased, groundwater levels will eventually return to pre-mining conditions, with potentially a lower overall elevation due to changes in storage and low natural recharge in the area.
Waste Rock Disposal Area #1: Waste rock disposal Area #1 shall be located within the northern portion of the existing open pit. The waste rock, or mining overburden, shall be generated as part of excavating ramps, stope access, inter-stope access, and stope access slashing. Waste rock is estimated to account for approximately 500,000 tons of material when mining ceases. The permanent storage of the waste rock shall be part of the ongoing reclamation at the Copperstone Mine. All contact and non-contact stormwater associated with Waste Rock Disposal Area#1 shall be contained in the existing open pit.
Waste Rock Disposal Area #2: Waste rock disposal Area #2 shall be located within the central portion of the existing open pit. The waste rock, or mining overburden, shall be generated as part of excavating ramps, stope access, inter-stope access, and stope access slashing. Waste rock is estimated to account for approximately 500,000 tons of material when mining ceases. The permanent storage of the waste rock shall be part of the ongoing reclamation at the Copperstone Mine. All contact and non-contact stormwater associated with Waste Rock Disposal Area #2 shall be contained in the existing open pit.

4.2. Compliance and Operational Monitoring

Table 9: Facility Inspection and Operational Monitoring- Log Book[1]		
Facility	**Inspection Protocols and Performance Levels**	**Inspection Frequency**
Tailings Storage Facility	• No visible cracks, holes, and/or leaks in liner • Minimum two (2) feet freeboard; • No evidence of seepage	• Quarterly and after precipitation events • Daily • Weekly
Recirculation Pond	• No visible cracks, holes, and/or leaks in liner; • Discharge barge pump system in good working order; • Minimum two (2) feet freeboard; • No evidence of seepage	• Quarterly and after precipitation events • Weekly • Daily • Weekly
Evaporation/ Infiltration Basin	• Minimum two (2) feet freeboard • No evidence of seepage or breack through the berms	• Daily • Weekly
Ore Stockpile	• No evidence of seepage; • Sufficient capacity	Weekly and after precipitation events
Waste Rock Pile	• No substantial slips at toe; • No substantial evidence of crest failures	Monthly

[1] The permittee shall record the inspection performance levels in a log book as per Section 2.7.2. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

Table 10: Waste Rock Monitoring[2] – Annual Report				
Leaching Potential of Waste Rock for the Following Metals:				
Parameter	**AL[3]**	**DL[4]**	**Units**	**Monitoring Frequency**
Sulfur	Monitor[5]	Monitor	mg/L	Monthly
Potential for Acid Generation	<2	Monitor	ANP/AGP[6]	Monthly
Arsenic	Monitor	Monitor	mg/L	Monthly
Barium	Monitor	Monitor	mg/L	Monthly
Cadmium	Monitor	Monitor	mg/L	Monthly
Chromium	Monitor	Monitor	mg/L	Monthly
Lead	Monitor	Monitor	mg/L	Monthly
Mercury	Monitor	Monitor	mg/L	Monthly
Selenium	Monitor	Monitor	mg/L	Monthly
Silver	Monitor	Monitor	mg/L	Monthly

Table 11: Ore Stockpile Monitoring[7] – Annual Report				
Leaching Potential of Ore Stockpile for the Following Metals:				
Parameter	**AL**	**DL**	**Units**	**Monitoring Frequency[8]**
Sulfur	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Potential for Acid Generation	<2	Monitor	ANP/AGP	Every 25,000 tons or monthly
Arsenic	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Barium	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Cadmium	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Chromium	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Lead	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Mercury	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Selenium	Monitor	Monitor	mg/L	Every 25,000 tons or monthly
Silver	Monitor	Monitor	mg/L	Every 25,000 tons or monthly

[2] Waste rock from mining activities shall be sampled and analyzed at a frequency of one composite sample per month for the specific analytical methods listed in Section 4.2, Table 10 of this permit. The results shall be reported annually according to the terms specified in Section 2.7.4.2.
[3] AL = Alert Levels
[4] DL = Discharge Limits
[5] Monitor = Analysis is required but limits are not established.
[6] ANP/AGP = ratio of acid neutralization potential to acid generation potential.
[7] Ore stockpile shall be sampled and analyzed at a frequency of one composite sample per every 25,000 tons or monthly, whichever is more frequent, for the specific analytical methods listed in Section 4.2, Table 11 of this permit. The results shall be reported annually according to the terms specified in Section 2.7.4.3.
[8] Monitoring Frequency = 25,000 tons or monthly (whichever is more frequent).

Table 12: Groundwater Monitoring for Current POC Well (POC-1)					
Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
1	Approximately 1400 ft. south of the proposed infiltration basin (POC-1)			33° 51' 55.62" N	114° 17' 44.39" W
Parameter[9]	**AL[10]**	**AQL[11]**	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Groundwater Level (amsl[12])	Monitor[13]	Monitor	Feet	Quarterly	Quarterly
Oil and grease	Monitor	Monitor	mg/L	Quarterly	Quarterly
Temperature	Monitor	Monitor	Degrees	Quarterly	Quarterly
pH (field)	Monitor	Monitor	S.U. [14]	Quarterly	Quarterly
pH (lab)	Monitor	Monitor	S.U.	Quarterly	Quarterly
Specific Conductance (field)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Specific Conductance (lab)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/L	Quarterly	Quarterly
Total Organic Carbon	Monitor	Monitor	mg/L	Quarterly	Quarterly
Alkalinity	Monitor	Monitor	mg/L	Quarterly	Quarterly
Sulfate	316	Monitor	mg/L	Quarterly	Quarterly
Antimony	0.0048	0.006	mg/L	Semi-Annual	Semi-Annual
Arsenic	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Barium	1.6	2.0	mg/L	Semi-Annual	Semi-Annual
Beryllium	0.0032	0.004	mg/L	Semi-Annual	Semi-Annual
Boron	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Cadmium	0.004	0.005	mg/L	Semi-Annual	Semi-Annual
Calcium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chloride	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chromium	0.08	0.1	mg/L	Semi-Annual	Semi-Annual
Copper	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Fluoride	Not Applicable	8.0	mg/L	Semi-Annual	Semi-Annual
Hardness[15]	97	Monitor	mg/L	Semi-Annual	Semi-Annual
Iron	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Lead	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Magnesium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Manganese	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Mercury	0.0016	0.002	mg/L	Semi-Annual	Semi-Annual
Nickel	0.08	0.1	mg/L	Semi-Annual	Semi-Annual
Nitrate	8	10	mg/L	Semi-Annual	Semi-Annual
Nitrite	0.8	1	mg/L	Semi-Annual	Semi-Annual
Nitrate + Nitrite (as N)	8	10	mg/L	Semi-Annual	Semi-Annual

[9] Metals shall be analyzed as dissolved metals.
[10] AL = Alert Levels
[11] AQL = Aquifer Quality Limits
[12] amsl = above mean sea level
[13] Monitor = Analysis is required but an AQL and/or AL is not established in the permit
[14] S.U. = Standard Units
[15] Hardness may be expressed as the sum of calcium plus magnesium as calcium carbonate (CaCO3)
mg/L = milligrams per liter umhos/cm = micromhos per centimeter

Table 13: Groundwater Monitoring for Current POC Well (POC-1) - continued					
Parameter[16]	**AL**[17]	**AQL**[18]	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Potassium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Selenium	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Silver	0.02	Monitor	mg/L	Semi-Annual	Semi-Annual
Sodium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Thallium	0.0016	0.002	mg/L	Semi-Annual	Semi-Annual
Zinc	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Benzene	0.004	0.005	mg/L	Biennial	Biennial
Ethylbenzene	0.56	0.7	mg/L	Biennial	Biennial
Toluene	0.8	1	mg/L	Biennial	Biennial
Xylenes (total)	8	10	mg/L	Biennial	Biennial

[16] Metals shall be analyzed as dissolved metals.
[17] AL = Alert Levels
[18] AQL = Aquifer Quality Limits

Table 14: Groundwater Monitoring for Current POC Well (POC-2)					
Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
2	Approximately 1100 ft. SE of the proposed infiltration basin (POC-2)			33° 52' 07.40" N	114° 17' 23.78" W
Parameter[19]	**AL[20]**	**AQL[21]**	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Groundwater Level (amsl[22])	Monitor[23]	Monitor	Feet	Quarterly	Quarterly
Oil and grease	Monitor	Monitor	mg/L	Quarterly	Quarterly
Temperature	Monitor	Monitor	Degrees	Quarterly	Quarterly
pH (field)	Monitor	Monitor	S.U. [24]	Quarterly	Quarterly
pH (lab)	Monitor	Monitor	S.U.	Quarterly	Quarterly
Specific Conductance (field)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Specific Conductance (lab)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/L	Quarterly	Quarterly
Total Organic Carbon	Monitor	Monitor	mg/L	Quarterly	Quarterly
Alkalinity	Monitor	Monitor	mg/L	Quarterly	Quarterly
Sulfate	351	Monitor	mg/L	Quarterly	Quarterly
Antimony	0.0048	0.006	mg/L	Semi-Annual	Semi-Annual
Arsenic	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Barium	1.6	2.0	mg/L	Semi-Annual	Semi-Annual
Beryllium	0.0032	0.004	mg/L	Semi-Annual	Semi-Annual
Cadmium	0.004	0.005	mg/L	Semi-Annual	Semi-Annual
Calcium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chloride	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chromium	0.08	0.1	mg/L	Semi-Annual	Semi-Annual
Copper	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Fluoride	Not Applicable	7.1	mg/L	Semi-Annual	Semi-Annual
Hardness[25]	113	Monitor	S.U	Semi-Annual	Semi-Annual
Iron	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Lead	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Magnesium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Manganese	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Mercury	0.0016	0.002	mg/L	Semi-Annual	Semi-Annual
Nickel	0.08	0.1	mg/L	Semi-Annual	Semi-Annual
Nitrate	8	10	mg/L	Semi-Annual	Semi-Annual
Nitrite	0.8	1	mg/L	Semi-Annual	Semi-Annual
Nitrate + Nitrite (as N)	8	10	mg/L	Semi-Annual	Semi-Annual

[19] Metals shall be analyzed as dissolved metals.
[20] AL = Alert Levels
[21] AQL = Aquifer Quality Limits
[22] amsl = above mean sea level
[23] Monitor = Analysis is required but an AQL and/or AL is not established in the permit
[24] S.U. = Standard Units
[25] Hardness may be expressed as the sum of calcium plus magnesium as calcium carbonate (CaCO3)
mg/L = milligrams per liter umhos/cm = micromhos per centimeter

Table 15: Groundwater Monitoring for Current POC Well (POC-2) - continued					
Parameter[26]	**AL**[27]	**AQL**[28]	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Potassium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Selenium	0.04	0.05	mg/L	Semi-Annual	Semi-Annual
Silver	0.02	Monitor	mg/L	Semi-Annual	Semi-Annual
Sodium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Thallium	0.0016	0.002	mg/L	Semi-Annual	Semi-Annual
Zinc	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Benzene	0.004	0.005	mg/L	Biennial	Biennial
Ethylbenzene	0.56	0.7	mg/L	Biennial	Biennial
Toluene	0.8	1	mg/L	Biennial	Biennial
Xylenes (total)	8	10	mg/L	Biennial	Biennial

[26] Metals shall be analyzed as dissolved metals.
[27] AL = Alert Levels
[28] AQL = Aquifer Quality Limits

Table 16: Compliance Groundwater Monitoring for 18-18A-01					
Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
3	Approximately 800 ft. North of Waste Rock Disposal Area #1 (18-18A-01)			33° 52' 39.811" N	114° 17' 57.621" W
Parameter[29]	**AL**[30]	**AQL**[31]	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Groundwater Level (amsl[32])	Monitor[33]	Monitor	Feet	Quarterly	Quarterly
Oil and grease	Monitor	Monitor	mg/L	Quarterly	Quarterly
Temperature	Monitor	Monitor	Degrees	Quarterly	Quarterly
pH (field)	Monitor	Monitor	S.U. [34]	Quarterly	Quarterly
pH (lab)	Monitor	Monitor	S.U.	Quarterly	Quarterly
Specific Conductance (field)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Specific Conductance (lab)	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/L	Quarterly	Quarterly
Total Organic Carbon	Monitor	Monitor	mg/L	Quarterly	Quarterly
Alkalinity	Monitor	Monitor	mg/L	Quarterly	Quarterly
Sulfate	Reserved	Monitor	mg/L	Quarterly	Quarterly
Antimony	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Arsenic	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Barium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Beryllium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Cadmium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Calcium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chloride	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Chromium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Copper	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Fluoride	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Hardness[35]	Monitor	Monitor	S.U	Semi-Annual	Semi-Annual
Iron	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Lead	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Magnesium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Manganese	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Mercury	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Nickel	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Nitrate	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Nitrite	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Nitrate + Nitrite (as N)	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual

[29] Metals shall be analyzed as dissolved metals.
[30] AL = Alert Levels
[31] AQL = Aquifer Quality Limits
[32] amsl = above mean sea level
[33] Monitor = Analysis is required but an AQL and/or AL is not established in the permit
[34] S.U. = Standard Units
[35] Hardness may be expressed as the sum of calcium plus magnesium as calcium carbonate (CaCO3)
mg/L = milligrams per liter umhos/cm = micromhos per centimeter

Table 17: Compliance Groundwater Monitoring for 18-18A-01 - continued					
Parameter[36]	**AL**[37]	**AQL**[38]	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Potassium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Selenium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Silver	Reserved	Monitor	mg/L	Semi-Annual	Semi-Annual
Sodium	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Thallium	Reserved	Reserved	mg/L	Semi-Annual	Semi-Annual
Zinc	Monitor	Monitor	mg/L	Semi-Annual	Semi-Annual
Benzene	Reserved	Reserved	mg/L	Biennial	Biennial
Ethylbenzene	Reserved	Reserved	mg/L	Biennial	Biennial
Toluene	Reserved	Reserved	mg/L	Biennial	Biennial
Xylenes (total)	Reserved	Reserved	mg/L	Biennial	Biennial

Table 18: Leak Collection and Removal System Monitoring[39] (Log Book) [40]					
LCRS Sump	**Parameter**	**Alert Level 1**[41] **(gpd)**	**Alert Level 2**[42] **(gpd)**	**Monitoring Method**	**Monitoring Frequency**
Recirculation Pond Sump 1	Liquid Pumped[43]	384	48,867	Automated	Daily

[36] Metals shall be analyzed as dissolved metals.
[37] AL = Alert Levels
[38] AQL = Aquifer Quality Limits
[39] If an Alert Level #1 or Alert Level #2 has been exceeded as discussed in Sections 2.6.2.3 and 2.6.2.4, the permittee shall submit an annual report that summarizes the results of the liner assessment. The Liner Leakage Assessment Report shall also include information including but not limited to the following: number and location of holes identified; a table summarizing the exceedances including the frequency and quantity of fluid removed, and corrective actions taken.
[40] The permittee shall record the inspection performance levels in a log book as per Section 2.7.2 and report any exceedances as per Section 2.6.2.2. In the case of an exceedance, identify which structure exceeds the performance level in the log book. No SMRFs.
[41] AL#1= Exceedance in Alert Level #1. The permittee shall place into action the requirements presented in 2.6.2.3. Exceedance of an AL is not a violation. If no event occurred, the Permittee shall state the fact in the Log Book.
[42] AL#2 = Exceedance in Alert Level #2. The permittee shall place into action the requirements presented in 2.6.2.4. Exceedance of an AL is not a violation. If no event occurred, the Permittee shall state the fact in the Log Book.
[43] The "Liquid Pumped" value to be reported is the amount of liquid pumped from the LCRS sump in gpd.

Table 19: Contingency Discharge Characterization for BADCT Failures and Overtopping[44]		
Parameter	**Units**	**Monitoring Frequency[45]**
pH (field)	Standard Units	One sample
Total Dissolved Solids (TDS)	mg/L	One sample
Specific Conductance (lab)	umhos/cm	One sample
Hardness [46]	Standard Units	One sample
Total Organic Carbon	mg/L	One sample
Alkalinity	mg/L	One sample
Sulfate	mg/L	One sample
Antimony	mg/L	One sample
Arsenic	mg/L	One sample
Barium	mg/L	One sample
Beryllium	mg/L	One sample
Boron	mg/L	One sample
Cadmium	mg/L	One sample
Calcium	mg/L	One sample
Chloride	mg/L	One sample
Chromium	mg/L	One sample
Copper	mg/L	One sample
Fluoride	mg/L	One sample
Iron	mg/L	One sample
Lead	mg/L	One sample
Magnesium	mg/L	One sample
Manganese	mg/L	One sample
Mercury	mg/L	One sample
Nickel	mg/L	One sample
Nitrate	mg/L	One sample
Nitrite	mg/L	One sample
Nitrate + Nitrite (as N)	mg/L	One sample
Potassium	mg/L	One sample
Selenium	mg/L	One sample
Silver	mg/L	One sample
Sodium	mg/L	One sample
Thallium	mg/L	One sample
Zinc	mg/L	One sample
Ethylbenzene	mg/L	One sample
Toluene	mg/L	One sample
Xylenes (total)	mg/L	One sample

[44] Monitor under this table per Section 2.6.3.1, Surface Impoundments, Liner Failure, Containment Structure Failure, Unexpected Loss of Fluid, (TSF, Recirculation Pond or the Evaporation/Infiltration Basin) or Section 2.6.3.2, Overtopping of an Impoundment.

[45] One sample shall be taken within five (5) days of discovery of an event.

[46] Hardness may be expressed as the sum of calcium plus magnesium as calcium carbonate (CaCO3)
mg/L = milligrams per liter umhos/cm = micromhos per centimeter

5.0 REFERENCES AND PERTINENT INFORMATION

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

APP Application, dated:	December 3, 2018
Contingency Plan, dated:	June 5, 2017
Hydrology memo, dated:	June 13, 2019
Engineering memo, dated:	May 23, 2019
Financial memo, dated:	August 5, 2019
Public Notice, dated:	August 12, 2019
Public Hearing, dated:	
NA	
APP Significant Amendment Application, dated:	January 19, 2024
Parker Basin Fluoride Study, dated:	August 26, 2021

6.0 NOTIFICATION PROVISIONS

6.1. Duty to Comply

[A.R.S. §§ 49-221 through 263]

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

6.2. Duty to Provide Information

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

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

6.3. Compliance with Aquifer Water Quality Standards

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

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

6.4. Technical and Financial Capability

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

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

6.5. Reporting of Bankruptcy or Environmental Enforcement

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

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

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

6.6. Inspection and Entry

[A.R.S. §§ 41-1009, 49-203(B), and 49-243(K)(8)]

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

6.7. Duty to Modify

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

The permittee shall apply for a permit amendment prior to making changes to the design or operational practices as required under A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211.

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

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

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

7.0 ADDITIONAL PERMIT CONDITIONS

7.1. Other Information

[A.R.S. § 49-243(K)(8)]

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

7.2. Severability

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

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

7.3. Permit Transfer

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