

**STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-102110
PLACE ID 9662, LTF 79361
SIGNIFICANT AMENDMENT**

1.0 Authorization

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, and Chapter 4, 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, Oracle Ridge Mining, LLC is hereby authorized by the Arizona Department of Environmental Quality (ADEQ) to operate the Tailing Storage Facility (TSF) associated with the inactive Oracle Ridge Copper Mine located in Pima County, Arizona. The TSF and associated property is located over groundwater associated with Stratton Canyon, Gibb Wash, Geesaman Wash, and Alder Canyon, tributaries to the San Pedro River in portions of Township 11 South, Range 16 East, portions of Sections 11, 12, 13, 14, of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division 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: Oracle Ridge Mine Tailing Storage Facility
Facility Address: 14319 N. Control Road, Summerhaven, AZ 85619

Annual Registration Fee Flow Rate: Not Applicable

Permittee: Wedgetail Operations LLC
Permittee Address: 10445 N. Oracle Road, Suite 101, Oro Valley, AZ 85737

Facility Contact: Asa Knapp
Emergency Phone No.: (520) 351-2799

Latitude/Longitude: 32° 28' 57.88" N/110° 41' 30.34" W
Legal Description: Township 11 S, Range 16E, portions of Sections 11, 12, 13, 14, of the Gila and Salt River Base Line and Meridian.

1.2 Authorizing Signature

Trevor Baggione, Director, Water Quality Division
Arizona Department of Environmental Quality
Signed this _____ day of _____, 2020

THIS AMENDMENT SUPERSEDES ALL PREVIOUS AMENDMENTS

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)]

The TSF received tailing from the Oracle Ridge Copper mine, an underground mine located beneath Marble Peak in the Santa Catalina Mountains, approximately 2 miles north of Summerhaven, Arizona and approximately 8½ miles south of the Town of Oracle, Arizona in Pima County, Arizona. The mine stopped operating in 1996 and TSF ceased operations at the same time. The TSF operated from 1990 to 1996. It was capped and closed between 2007 and 2011.

Wedgetail Operations is conducting exploration activities at the mine site. There are no plans at this time to initiate mining or to operate the tailing storage facility. With the exception of materials required to maintain the cap placed on the TSF, this permit does not authorize placement of any materials on the closed TSF.

The site includes the following permitted facility:

TABLE 1 APP Regulated Facilities		
Facility	Latitude	Longitude
Tailing Storage Facility	32° 28' 57.88"	110° 41' 30.34"

2.1.1 Annual Registration Fee [A.R.S. § 49-242 and A.A.C. R18-14-104]

Not applicable. Operations have ceased at this facility.

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

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the life of the facility. The estimated post-closure cost for bi-annual groundwater sampling and annual TSF inspection for a period 6 years, and monitor well abandonment is \$104,573.30. Pursuant to A.A.C. R18-9-A203(C)(3), the financial assurance mechanism was demonstrated through a Certificate of Deposit.

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The TSF shall be 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 TSF is the only permitted APP facility.

TSF:

The TSF was closed between 2007 and 2011. As per Section 3.0, the permittee shall evaluate the efficacy of the current cap, and stormwater control features present at the TSF.

2.2.2 Site-specific Characteristics

Not applicable for this permit.

2.2.3 Pre-operational Requirements

Not applicable for this permit.

2.2.4 Operational Requirements

Not applicable for this permit.

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

With the exception of materials required to maintain the cap placed on the TSF, this permit does not authorize placement of any materials on the closed TSF.

2.4 Point(s) of Compliance [A.R.S. § 49-244]

The POC(s) are established by the following monitoring location(s):

TABLE 2 POC Wells						
POC Locations	ADWR Well #	Latitude	Longitude	Total Depth of Well (ft. bls)	Screen Interval (ft. bls)	Depth to Water (ft. bls)
MW-5	55-913472	32° 29' 1.950" N	110° 41' 4.480" W	200	155-200	180
MW-6	55-913471	32° 29' 7.130" N	110° 41' 13.550" W	70	15 - 70	20

Monitoring requirements for each POC are listed in Section 4.1, Table 4. The Director may amend this permit to designate additional POCs, if information on groundwater gradients or groundwater usage indicates the need.

2.4.1 Data Continuity Wells

The Data Continuity Wells (DCW) are established at the following monitoring locations:

TABLE 3 Data Continuity Wells (DCW)						
DCW ID	ADWR Well #	Latitude	Longitude	Total Depth of Well (ft. bls)	Screen Interval (ft. bls)	Depth to Water (ft. bls)
MW-2	55-523471	32° 29' 2.560" N	110° 41' 15.330" W	190	110-190	~57 ft
MW-4	55-528930	32° 29' 4.930" N	110° 41' 19.640" W	90	73-90	~64 ft

Groundwater monitoring is required for the DCWs as per Section 4.1, Table 4.

2.5 Monitoring Requirements [A.R.S. § 49-243(B) and (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. 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 immediately available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

Not applicable for this permit.

2.5.2 Facility / Operational Monitoring

The permittee shall conduct annual inspections of the TSF as per Section 4.1, Table 3 to ensure stable conditions are being maintained for the TSF and the stormwater diversion channels are functioning as designed and that there no sediment buildup.

2.5.3 Groundwater Monitoring and Sampling Protocols

Post-closure compliance groundwater monitoring is required under the terms of this permit. For all sampling methods, 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 Self-monitoring Report Form (SMRF).

As an alternative method for sampling, 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.

As a third alternative method for sampling within POC wells with very low recharge rates, the permittee may conduct the sampling using no-purge sampling techniques using HydraSleeve™ or similar type methodology. The use of HydraSleeve™ or similar type samplers shall follow accepted EPA, USGS, and DOD protocols. In addition, the HydraSleeve™ or similar type sampler shall be placed just below the water table.

2.5.3.1 POC and DCW Well Replacement

In the event that one or more of the designated wells in Tables 2 OR Table 3 become unusable or inaccessible due to damage, exceedance of alert level (AL) for water level or any other event, a replacement 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. Otherwise, the ALs and/or AQLs shall be set following the provisions in Section 2.5.3.3 and Section 2.5.3.4 of this permit.

2.5.3.2 Post-Closure Groundwater Quality Monitoring

The permittee shall analyze groundwater samples for the parameters listed in Section 4.1, Table 4.

2.5.3.3 Alert Levels for POC Wells

ALs shall be calculated for all contaminants with an established numeric AWQS for each of the POC wells listed in Section 4.1, Table 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 compliance schedule item No. 4, following receipt of the laboratory analyses for the final month of the ambient groundwater monitoring period for each POC well referenced in Section 4.1, Table 4 the permittee shall submit the ambient groundwater data in tabulated form to the Groundwater Protection Value Stream 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 4.1, Table 4 to be established for each POC well, shall be submitted to the Groundwater Protection Value Stream. 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 Value Stream. The ALs shall be established and calculated by the following formula, or another valid statistical method submitted to Groundwater Protection Value

Stream in writing and approved for this permit by the Groundwater Protection Value Stream:

$$AL = M + KS$$

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.

2.5.3.4 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 Surface Water Monitoring and Sampling Protocols

Not applicable for this permit.

2.5.5 Analytical Methodology

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

2.5.6 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 ADEQ Groundwater Protection Value Stream 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

Upon submittal and ADEQ approval of the contingency and emergency response plan as required by Section 3.0, these plans shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plan.

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

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. 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 has been conducted. The permittee is responsible for compliance with contingency plans 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 Exceeding of Performance Levels Set for Operational Conditions

Not applicable for this permit.

2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring

Not applicable for this permit.

2.6.2.3 TSF Slope Conditions

The permittee shall monitor the TSF for general slope conditions as per Section 4.1, Table 3 to identify unusual scour or degradation of materials, sloughing, rolling rocks or visible seepage. If the TSF exhibits any signs that require maintenance, the permittee shall take the following actions:

1. After discovery prevent vehicle and/or foot traffic in the area.
2. Notify the engineer of record (EOR).
3. If necessary, perform remedial actions approved by the EOR.
4. Monitor the area for signs of decreasing slope stability.

2.6.2.4 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.4.1 Alert Levels for Indicator Parameters

Monitoring for Indicator Parameters TDS and Sulfate is required under the terms of this permit.

1. If an AL for an indicator parameter set in Section 4.1, Table 4 has been exceeded, the permittee may conduct verification sampling within 5 days of becoming aware of the 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 the verification sample.
2. If verification sampling confirms the AL exceedance or if the permittee opts not to perform verification sampling, then the permittee shall sample for the complete set of pollutants listed in Section 4.1, Table 4 at the frequency specified in that Table.
3. The permittee shall continue testing for this set of pollutants until all indicator parameters have remained below the AL for four consecutive sampling events.
4. If an AL for a pollutant with a Numeric Aquifer Water Quality Standard in Section 2.6.2.3.2 has been exceeded and the requirements in this section for indicator parameters continue in the same POC well, the permittee shall resume the monitoring frequency specified in Section 4.1, Table 4 and follow the requirements set in Section 2.6.2.3.2.

2.6.2.4.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

1. If an AL for a pollutant set in Section 4.1, Table 4 has been exceeded, the permittee may conduct verification sampling of the pollutant(s) that exceed their respective AL(s) within 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 for the pollutant(s) exceeding 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 2.6 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 an AL exceedance may be reduced to semi-annual if the results of three (3) sequential sampling events demonstrate that the 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 three (3) 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 third (3rd) sampling event.

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

Not applicable at this time.

2.6.2.4.4 Alert Level for Groundwater Level

Not applicable.

2.6.3 Discharge Limitations Violations

This section is not applicable. Operations have ceased at this facility, and shall not resume without a significant amendment to this aquifer protection permit.

2.6.4 Aquifer Quality Limit Violation

1. If an AQL set in Section 4.1 Table 4 has been exceeded, the permittee may conduct verification sampling for those pollutant(s) that were above their respective AQL(s) within 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 to monthly for those pollutant(s) that exceeded their respective AQL(s). 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, 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 ADEQ 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 ADEQ 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 an ADEQ 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 pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241 That Are Not Addressed Elsewhere in Section 2.6

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 Value Stream within 24 hours upon discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL to be exceeded, 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 Value Stream within 24 hours upon discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) 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 Groundwater Protection Value Stream 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. 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 that 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 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an 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; and/or
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the Groundwater Protection Value Stream, 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. When submitting hard copy, the permittee shall complete the SMRFs provided by ADEQ, and submit them to the Groundwater Protection Value Stream, 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 SMRF and include an explanation, and submit the report to the Groundwater Protection Value Stream.
3. The following tables contained in Section 4.0 list the parameters to be monitored and the frequency for reporting results on the SMRFs.

- Table 4 Groundwater Monitoring of POC Wells & Data Continuity Wells

The parameters listed in the above identified table from Section 4.1 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 immediately 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; and
7. Monitoring records for each measurement shall comply with R18-9 A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection Value Stream in writing within 5 days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation or of an AL exceedance 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 Value Stream within 30 days of becoming aware of the violation of any permit condition or discharge limitation (NOTE: This reporting requirement is not applicable to Sections 2.6.2.2 and 2.6.2.3 related to alert level exceedance for liner leakage). 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 its cause;
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated

- 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

Not applicable to this permit.

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>

All other documents required by this permit shall be mailed to:

The Arizona Department of Environmental Quality
 Groundwater Protection Value Stream
 Mail Code 5415B-3
 1110 West Washington Street
 Phoenix, Arizona 85007
 Phone (602) 771-4571

2.7.6 Reporting Deadline

The following table lists the semi-annual and annual SMRF due dates:

Monitoring conducted:	Semi-Annual/Annual SMRF Report due by:
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30 of the following year

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Protection Value Stream shall be notified within 15 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 Value Stream before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report “temporary cessation” in the comment section.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ’s approval, the permittee shall 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 Value Stream of the

operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

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

The TSF is closed in place.

2.9.1 Closure Plan

The permitted facility is closed. This section is not applicable.

2.9.2 Closure Completion

Not applicable.

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

Post-closure groundwater monitoring shall be conducted for six (6) years. If during this period of monitoring, if an increasing concentration trend of parameters monitored in Section 4.1, Table 4 is observed, ADEQ may require the monitoring under the post-closure period to continue. The period of continued post-closure monitoring will be determined based on the observations made during the previous six (6) years.

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 Value Stream a Post-closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-closure Plan shall meet all requirements of A.R.S. §§ 49-201(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the Post-closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-closure Plan.

2.10.1 Post-closure Plan

The post-closure plan includes post-closure monitoring and inspections as described in this permit.

2.10.2 Post-closure Completion

The post-closure completion will be determined based on the monitoring results and the conditions discussed in Section 2.10 above.

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

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Protection Value Stream.

No.	Description	Due by:	Permit Amendment Required?
1	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.	September 30, 2026 and every 6 years thereafter for the duration of the permit.	Yes
2	The permittee shall conduct an evaluation of the tailing storage facility cover and evaluate its efficacy in minimizing infiltration and prevention of discharges from the facility. The evaluation shall include observations of: cover thickness; vegetation condition including areas that have sparse or no vegetation; areas of exposed tailings; evidence of ponding water; areas of rill and gully erosion; evidence surficial cracking; areas significant cover material changes. The review shall also include review of the most current topography developed from aerial methods. If existing cover is found to not meet BADCT requirements, the permittee shall submit design recommendations to upgrade the facility. All finding shall be presented in a report signed, dated and sealed by an Arizona-registered professional engineer.	Within 180 days of issuance of the permit.	No
3	The permittee shall conduct a review of existing hydrologic studies with respect to the run-on and run-off controls associated with the tailings storage facility and evaluate whether these controls provide sufficient discharge controls to meet BADCT requirements. If existing run-on and run-off controls do not sufficiently reduce discharges from the facility, the permittee shall submit design recommendations to upgrade the controls. All finding shall be presented in a report signed, dated and sealed by an Arizona-registered professional engineer.	Within 180 days of issuance of the permit.	No
4	Permittee shall submit a trend analysis of sulfate and TDS concentrations using accepted statistical methods for MW 2, MW-4, MW-5 and MW-6 every two years. If concentration trends indicate the potential for aquifer water quality impacts to downgradient wells, ADEQ may consider establishing site-specific Use Protection Levels (UPLs) using a narrative AWQS for sulfate and TDS. Mitigation measures and corrective action to protect future beneficial uses of the aquifer may also be considered. The report shall include recommendations based on the findings to protect downgradient groundwater uses.	Reports to be submitted within 30 days of receiving the analytical report laboratory analytical for the 2 year sampling event.	No
5	Permittee shall submit a contingency and emergency response plan for ADEQ approval in accordance with Section 2.6 of this Permit	Within 30 days of issuance of the permit.	No

4.0 TABLES

4.1 REQUIRED MONITORING

TABLE 3 REQUIRED INSPECTIONS AND OPERATIONAL MONITORING

TABLE 4 GROUNDWATER MONITORING OF POC WELLS & DATA CONTINUITY WELLS

TABLE 3 REQUIRED INSPECTIONS AND OPERATIONAL MONITORING		
Facility	Inspection Frequency	Items to Be Inspected and Recordkeeping¹
Tailings Storage Facility	Annually	Visually inspect the TSF for unusual physical conditions and take appropriate actions if any evidence of (1) evidence of excessive ponding (lack of drainage), (2) slope sloughing, (3) erosion on the tailings surface, (4) evidence of surface cracking, movement, settlement, (5) subsidence or sinkholes in the tailings, (6) condition of perimeter ditches and flow-through drains, and (7) other unusual conditions. Inspection observations will be recorded in the APP Facility Logbook.
Stormwater Diversion or Collection Channels	Annually	Visually inspect and take appropriate action if any evidence of: (1) excessive erosion that potentially impacts structural integrity, and (2) excessive vegetation or debris that inhibits flow. Inspection observations will be recorded in the APP Facility Logbook.

¹ The recordkeeping included in this table is for purposes of recording operational monitoring and inspections. Other permit reporting requirements may apply for corrective action, emergency response, or equipment or facility repairs.

TABLE 4
GROUNDWATER MONITORING OF POC WELLS & DATA CONTINUITY WELLS

Parameter ²	Units	POC Wells (Semi-Annual Monitoring)				Data Continuity Wells (Annual Monitoring)			
		MW-5		MW-6		MW-2		MW-4	
		AQL ³	AL ⁴	AQL	AL	AQL	AL	AQL	AL
Depth to Water	Feet TOC ⁵	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Water Level Elevation	Feet AMSL ⁶	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Antimony	mg/l	0.006	0.0048	0.006	0.0048	0.006	0.0048	0.006	0.0048
Arsenic	mg/l	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Barium	mg/l	2	1.6	2	1.6	2	1.6	2	1.6
Beryllium	mg/l	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032
Cadmium	mg/l	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Chromium	mg/l	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08
Lead	mg/l	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Mercury	mg/l	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	mg/l	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08
Selenium	mg/l	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Thallium	mg/l	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Fluoride	mg/l	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Nitrogen, Nitrate	mg/l	10	8	10	8	10	8	10	8
Nitrogen, Nitrite	mg/l	1	0.8	1	0.8	1	0.8	1	0.8
Nitrate + Nitrite	mg/l	10	8	10	8	10	8	10	8
pH ⁷	SU	NE ¹¹	6.5 - 9	NE ¹¹	6.5 - 9	NE ¹¹	6.5 - 9	NE ¹¹	6.5 - 9
Chloride	mg/l	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Sulfate	mg/l	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Conductivity	Umhos/cm	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Total Dissolved Solids	mg/l	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Temperature	Deg C	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor

² Metals shall be dissolved metals, unless otherwise specified.

³ AQL = Aquifer Quality Limit

⁴ AL = Alert Level

⁵ Depth to water shall be measured as feet below Top of Casing (TOC) from the marked measuring point on each monitoring well.

⁶ AMSL = Above mean sea level

⁷ Not established = Monitoring is required but no limits have been specified.

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:

Significant Amendment to APP

APP Amendment Application Dated: March 6, 2020

Public Notice Date:

Documents Reviewed:

- Significant Amendment Application P-102110, dated March 6, 2020, prepared by Clear Creek Associates
- Significant Amendment Application – Amendment P-102110, dated April 1, 2020, prepared by Clear Creek Associates

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 49-263]

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.

6.3 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.

6.4 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 at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard 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.

6.5 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(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6 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.
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.

6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 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.

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

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices specified by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension & 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, renewed, or revoked for cause, under the rules of the Department.

The permittee shall notify the Groundwater Protection Value Stream 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).