STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-100329
PLACE ID 838, LTF 92904
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, 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 Pinto Valley Mining Corp. to operate the Pinto Valley Mine located approximately 8 miles west of Miami, Arizona, in Gila County, in Township 01 N, Range 13 E, Sections 1, 12, 13, 24, 25 and 36; and Township 01 N, Range 14 E, Sections 7, 18, 19, 20, 30, 31, and 32 of the Gila and Salt River Baseline 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:	Pinto Valley Mine
Facility Address:	2911 N Forest Service Road 287, Miami, AZ 85539
County:	Gila County
Annual Registration Fee Flow Rate:	Greater than 10,000,000 gallons per day (gpd)
Permittee:	Pinto Valley Mining Corp.
Permittee Address:	P. O. Box 100, Miami, AZ 85539-0100
Facility Contact:	General Manager; 928-473-6201
Emergency Phone No.:	(928) 200-3873
Latitude/Longitude:	33° 24′ 33.0" N / 110° 57′ 48.0" W
Legal Description:	Township 01 N, Range 13 E, Sections 1, 12, 13, 24, 25 and 36; and Township 01 N, Range 14 E, Sections 7, 18, 19, 20, 30, 31, and 32 of the Gila and Salt River Baseline and Meridian.

1.2. AUTHORIZING SIGNATURE

_____

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

Signed this _____ day of _____, 2022

THIS AMENDED PERMIT SUPERCEDES 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)]

The Pinto Valley Mine (PVM) includes an open-pit copper and molybdenum mine and ore beneficiation facilities. The facility consists of ore crushing and flotation concentrating operations, dump leaching and solvent extraction/electrowinning (SX-EW) operations, tailings impoundments, waste rock dumps, process solution ponds, stormwater runoff ponds, ancillary maintenance operation facilities, a solid waste landfill and a wastewater treatment plant (WWTP). The discharging facilities regulated under this permit, listed below, were reviewed according to the design and operational plans approved by the Arizona Department of Environmental Quality (ADEQ) Aquifer Protection Permit (APP) Program. The original APP for this facility was issued in 1996.

Millable ore is crushed and concentrated on-site. Copper concentrate is transported off-site to a third-party smelter. Molybdenum concentrates are containerized and shipped off-site. Low-grade ore is deposited in the dump leaching area referred to as Gold Gulch. Raffinate solution consisting of weak sulfuric acid is sprayed over the low-grade ore. The resulting pregnant leach solution (PLS) is collected in a double-lined facility with a leak detection system and pumped to the SX-EW Plant (APP-exempt) where it is processed using an organic SX-EW process. Resulting cathode copper is shipped off-site for further refining.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES

Facility	Latitude	Longitude	Drainage
Low-grade Ore Leach Piles, Gold Gulch Drainage and PLS Facilities			
Raffinate Pond	33° 24′ 27" N	110° 59′ 20" W	Whitman Draw
Low-grade Ore Leaching Piles	33° 25′ 30" N	110° 58′ 10" W	Gold Gulch
Gold Gulch Dam No. 2 and Reservoir (To be repurposed as a lined pond and renamed as "Gold Gulch No. 2 Process Solution Pond".)	33° 25′ 29" N	110° 59′ 30" W	Gold Gulch
Seepage/Stormwater Retention Facilities			
No. 1 Seepage Toe Drain and Caisson	33° 23′ 44" N	110° 59′ 00" W	Miller Gulch
No. 1 Upper Basin	33° 23′ 41" N	110° 59′ 05" W	Miller Gulch
No. 1 Lower Basin	33° 23′ 41" N	110° 59′ 08" W	Miller Gulch
Upper Catchment Upper Pond	33° 23′ 43" N	110° 58′ 39" W	Miller Gulch
Upper Catchment Lower Pond	33° 23′ 41" N	110° 58′ 41" W	Miller Gulch
Upper Catchment Toe Drain	33° 23′ 37" N	110° 58′ 43" W	Miller Gulch
Upper Tule Pond	33° 23'16" N	110° 58' 20" W	Miller Gulch
Lower Tule Pond	33° 23′ 18" N	110° 58′ 24" W	Miller Gulch
Lower Tule Caisson	33° 23′ 16" N	110° 58′ 23" W	Miller Gulch
North Pond	33° 23′ 52" N	110° 58′ 11" W	Miller Gulch
Peeples Pond	33° 23′ 50" N	110° 58′ 15" W	Miller Gulch
Southside Ditch	33° 23′ 24" N	110° 58′ 20" W	Miller Gulch
East Catchment & East Catchment Caisson	33° 25′ 21" N	110° 59′ 37" W	Whitman Draw
Slack/Conklin Pond	33° 25′ 14" N	110° 59′ 45" W	Whitman Draw
No. 3 Seepage Caisson	33° 25′ 22" N	110° 59′ 52" W	Whitman Draw
West Catchment	33° 25′ 11" N	110° 59′ 53" W	Whitman Draw
Canyon Dam	33° 25′ 24" N	111° 00′ 00" W	Whitman Draw
Road Crossing Pond	33° 24′ 14" N	110° 58′ 47" W	Gold Gulch
Able Pond	33° 25′ 34" N	110° 59′ 45" W	Gold Gulch

Table 1: DISCHARGING FACILITIES			
Facility	**Latitude**	**Longitude**	**Drainage**
Gold Gulch Final Catchment	33° 25′ 39" N	110° 59′ 36" W	Gold Gulch
Baker Pond	33° 25′ 45" N	110° 59′ 53" W	Gold Gulch
Rosa's Pond	33° 27′ 19" N	110° 59′ 27" W	Eastwater Canyon
Rosa's Pond Diversion Ditch	33° 27′ 20" N	110° 59′ 28" W	Eastwater Canyon
Road Pond/Lower Runoff Catchment Pond No. 1	33° 27′ 15" N	110° 59′ 40" W	Eastwater Canyon
Charlie Pond/Lower Runoff Catchment Pond No. 2	33° 27′ 18" N	110° 59′ 50" W	Eastwater Canyon
Long Pond	33° 27′ 23" N	110° 59′ 18" W	Eastwater Canyon
Short Pond	33° 27′ 26" N	110° 59′ 7" W	Eastwater Canyon
Yasin Catchment	33° 26′ 59" N	110° 59′ 41" W	Eastwater Canyon
Cottonwood Reservoir	33° 23′ 23" N	110° 57′ 37" W	Cottonwood Canyon
Cottonwood Seepage Caisson System	33° 23′ 04" N	110° 58′ 14" W	Cottonwood Canyon
Tailings Impoundments			
Tailings Storage Facility No. 1 (TSF1) (in post closure)	33° 23′ 55" N	110° 58′ 50" W	Miller Gulch
Tailings Storage Facility No. 2 (TSF2)	33° 24′ 30" N	110° 59′ 05" W	Whitman Draw
Tailings Storage Facility No. 3 (TSF3)	33° 25′ 00" N	110° 59′ 34" W	Whitman Draw
Tailings Storage Facility No. 4 (TSF4)	33° 27′ 04" N	110° 59′ 00" W	Eastwater Canyon
Waste Rock Dumps			
Northside Dump 9.1	33° 25′ 35" N	110° 58′ 47" W	Gold Gulch
Northside Dump 9.11	33° 25′ 23" N	110° 58′ 49" W	Gold Gulch
Northside Dump 9.12	33° 25′ 13" N	110° 58′ 44" W	Gold Gulch
Northside Dump 9.3	33° 24′ 25" N	110° 58′ 43" W	Gold Gulch
Southside Dump 13	33° 24′ 03" N	110° 58′ 18" W	Cottonwood Canyon
Southside Dump 14 (in post closure)	33° 23′ 59" N	110° 58′ 36" W	Miller Gulch
19 Dump	33° 23′ 36" N	110° 57′ 24" W	Cottonwood Canyon
19.1 Dump	33° 23′ 49" N	110° 57′ 51" W	Cottonwood Canyon
19 Extension Dump (not yet constructed)	33° 23′ 31" N	110° 57′ 04" W	Cottonwood Canyon
Castle Dome Marginal Dump	33°24'28.70"N	110°57'33.52"W	Open Pit
Main Dump	33°25'22.64"N	110°58'00.65"W	Gold Gulch
North Barn Marginal Dump	33°24'17.77"N	110°58'37.41"W	Gold Gulch
West Dump (not yet constructed)	33° 25' 06" N	110° 59' 02" W	Gold Gulch
Miscellaneous Facilities			
Open Pit	33º 24' 37" N	110° 57' 07" W	N/A
Concentrator	33° 23' 37" N	110° 57' 57" W	Miller Gulch
Wastewater Treatment Plant	33º 23' 30" N	110º 58' 17"W	Tule Tank
Solid Waste Landfill	33º 24' 19" N	110º 58' 41" W	N/A
The following facilities will continue to be used as permitted, until they are closed in-place upon construction of the West Dump.			
Gold Gulch PLS Ponds			
Gold Gulch No. 1 PLS Pond	33° 24′ 59" N	110° 58′ 53" W	Gold Gulch
Gold Gulch No. 1A PLS Pond	33° 25′ 02" N	110° 58′ 58" W	Gold Gulch
Lower Gold Gulch Caisson	33° 25′ 07" N	110° 59′ 10" W	Gold Gulch

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

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 site-wide closure cost estimate is $107,125,578, including $75,113,029 in direct closure costs, $27,380,806 in indirect closure costs, and $4,631,734 in post-closure costs. The permittee has demonstrated the financial capability through a performance surety bond in the amount of $107,125,578.

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). PVM currently relies on an actively managed pit containment, operational, hydrologic, and engineering controls to demonstrate BADCT as prescribed under this section. The permittee is authorized to operate the discharging facilities listed in Table 10: PERMITTED FACILITIES AND BADCT.

2.2.1. Engineering Design

Seven of the discharging facilities are 100 percent within the passive containment capture zone (PCCZ), and therefore partly rely on PCCZ for BADCT. The pit is dewatered by numerous vertical wells and barge pumps. Various catchments and associated diversion ditches prevent stormwater runoff from the surrounding hillsides from impacting the south and northeast areas of the wall slopes of the Open Pit. This permit authorizes storing stormwater and/or process water in the Open Pit during operations and temporary cessation. BADCT for the pit shall consist of maintaining the pit as containment by preventing the water level from exceeding an elevation of 3,270 feet above mean sea level (amsl) except for brief periods of time during emergency situations. This lake level elevation is 50 feet below the modeled flow-through elevation of 3,320 feet amsl in which passive containment would be lost. The exception for emergency situations is not to exceed 30 days in length without written approval of continuation by ADEQ. The stored water may be reclaimed to the extent practicable or allowed to evaporate if uses for it cannot be found.

Ponds G, H, J, K and L collect stormwater and are exempt from regulation as surface impoundments pursuant to A.R.S. §49-250(B)(10). These ponds intercept stormwater runoff from adjacent watersheds to prevent water from flowing into the pit. Stormwater from these ponds can be piped to Cottonwood Reservoir.

2.2.2. Site-Specific Characteristics

Site-specific characteristics that were used in the BADCT demonstration are included in this section. The depth to groundwater beneath this facility ranges from artesian conditions in APP-6 to 485 feet below ground surface (bgs) in S08-7, but varies seasonally.

Groundwater modeling results have been presented to ADEQ to demonstrate that the Open Pit constitutes a hydrologic sink. Modeling (SRK, 2018) was used as the basis for the BADCT demonstration for containment in the pit. Based upon the updated groundwater model submitted in the amendment application, the following facilities are located 100 percent within the PCCZ: Road Crossing Pond, Northside Dump 9.3, Southside Dump 13, 19.1 Dump, North Barn Marginal Dump, and the Solid Waste Landfill.

The following facilities are partially located within the calculated hydraulic sink:

- Castle Dome Marginal Dump (92 percent)
- Southside Dump 14 (61 percent)
- Main Dump (57 percent)
- Low-grade Ore Leaching Piles (55 percent)
- Tailing Storage Facility No. 1 and Tailings Storage Facility No. 2 (46 percent)
- Concentrator (25 percent)

All other APP facilities are located outside the PCCZ.

Monitoring, inspection, and reporting requirements associated with the pit lake and hydrologic sink shall be conducted in accordance with Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION of this permit.

2.2.2.1. Low-grade Ore Leach Piles, Gold Gulch Drainage and PLS Facilities

The following sections describe the site-specific BADCT for discharging facilities, if used in the BADCT demonstration.

2.2.2.1.1. Raffinate Pond

The soil cement-lined Raffinate Pond was constructed by excavation into an underlying limestone formation, which has a buffering capacity to neutralize acidic seepage, as demonstrated by column testing performed by Hargis + Associates (Hargis, 1997). This neutralization capacity shall be used to minimize infiltration of acidic solution and was considered and approved as part of BADCT design. If over time the neutralization potential of the underlying system is exceeded, BADCT upgrades may be required for this facility.

2.2.2.1.2. Low-grade Ore Leaching Piles

The bedrock underlying the Low-grade Ore Leaching Piles has an estimated hydraulic conductivity of less than 1 x 10-3 cm/sec, as demonstrated through a water budget analysis and testing (Hargis 1995). In addition, upward vertical gradients have been observed in wells in this area and there are springs located near-by (Hargis, 1995). The low hydraulic conductivity of the bedrock system that underlies the Low-grade Ore Leaching Piles and the presence of upward hydraulic gradients and springs in the area were considered as part of BADCT design for this facility. These characteristics shall be used to minimize the opportunity for infiltration of PLS into the underlying rocks.

2.2.2.1.3. Gold Gulch PLS Ponds

Gold Gulch No. 1 PLS Pond was constructed using on-site materials containing sufficient fines to provide a compacted, low permeability embankment which shall serve as a sedimentation pond prior to PLS conveyance to Gold Gulch No. 1A PLS Pond to reduce fines in PLS solutions pumping back for extraction. The estimated permeability of these materials is 1 x 10-3 cm/sec or less and this characteristic and the fact that PLS No. 1 was an existing facility at the time of permitting were used as part of the BADCT demonstration for this facility. These characteristics shall be used to prevent loss and migration of PLS to the bedrock aquifer that underlies the impoundment.

2.2.2.1.4. Gold Gulch No. 2 Process Solution Pond

Gold Gulch No. 2 Process Solution Pond will enlarge the footprint of the existing unlined Gold Gulch Dam No. 2 and Reservoir, which is excavated in dacite. The estimated permeability of dacite ranges from 1.1 x 10-4 to 1.1 x 10-5 cm/sec. The regrade plan shows a maximum cut of 45 feet and maximum fill of 20 feet along the side slopes. The upgrade to a lined pond facility will regrade the bottom of the pond to a minimum of 2% to a maximum of 10%. The lined side slopes will overlie dacite and shall be no steeper than 2.5H:1V.

2.2.2.1.5. Stormwater Containment at Gold Gulch

Hydraulic conductivity values for underlying foundation materials for the West Dump North and South Channels (including the portion of the South Channel located on the TSF3 tailings) is estimated to be 2x10-3 - 2x10-6 cm/sec.

2.2.2.1.6. West Dump

The part of the facility that will be deposited on undisturbed ground will be underlain by limestone and dacite. The hydraulic conductivity values for these units are approximately 2x10-3 - 2x10-6 cm/sec, and the demonstrated acid-neutralizing potential of the limestone will provide additional support of BADCT for the facility.

2.2.2.2. Seepage/Stormwater Retention Facilities

No site-specific characteristics were used in support of BADCT for these facilities.

2.2.2.3. Tailings Storage Facilities

Site-specific conditions shall be used to minimize the opportunity for acid-rock drainage production or accumulation and monitoring and characterization shall be performed in accordance with Sections 2.3.3 and 2.5.1.3 of this permit.

2.2.2.3.1. TSF1

TSF1 is underlain by Gila Conglomerate and limestone. The demonstrated acid neutralization potential of these two formations, based on testing, is used in support of BADCT for this impoundment (Hargis, 1997).

2.2.2.3.2. TSF2

TSF2 is underlain by volcanic rock and limestone. The demonstrated acid neutralization potential of these two formations, based on testing, is used in support of BADCT for this impoundment (Hargis, 1997).

2.2.2.3.3. TSF3

TSF3 and the adjoining TSF3 North Embankment Buttress are underlain by volcanic rock. The demonstrated acid neutralization potential of the volcanic rock, based on testing, is used in support of BADCT for this impoundment (Hargis, 1997, SRK, 2018).

2.2.2.3.4. TSF4

TSF4 is underlain by dacite and Gila Conglomerate. The demonstrated acid neutralization potential of these two formations, based on testing, is used in support of BADCT for this impoundment (Hargis, 1997).

2.2.2.4. Waste Rock Dumps

For existing waste rock dumps constructed prior to 1986, no site-specific characteristics were used in support of BADCT. The underlying rock types for each waste rock dump are known and an analysis of the acid-neutralization characteristics of the rock types at Pinto Valley was conducted by Hargis + Associates (Hargis, 1997) that concluded that the waste rock dumps were constructed on neutralizing or non-acid-generating bedrock.

For planned waste rock dumps, site-specific conditions shall be used to minimize the opportunity for acid-rock drainage production or accumulation. For BADCT in new waste rock dump locations, in

absence of further testing, closure cover designs will assume the rock dumps have the potential for generating low-pH fluids.

Stormwater runoff from the Waste Rock Dump areas shall be contained, reclaimed, and recycled into the process water control system. The east and south waste rock dumps shall consist of waste rock placed on non-acid generating schist, Gila Conglomerate, and Whitetail Conglomerate, as determined by testing for acid generating potential, Synthetic Precipitation Leaching Procedure tests and Acid Base Accounting. Runoff from these dumps shall either discharge to the Open Pit or the process water storage reservoir where it shall be contained, reclaimed, and recycled into the process water control system.

2.2.2.5. Concentrator Area

No site-specific characteristics were used in support of BADCT for this facility.

2.2.2.6. Solid Waste Landfill

The Solid Waste Landfill is located within the footprint of the Northside Dump 9.3. Formerly, disposal areas were prepared by excavating trenches within the waste rock dump, placing the materials in a trench, and covering the materials with additional waste rock.

2.2.2.7. Wastewater Treatment Plant

No site-specific characteristics were used in support of BADCT for the WWTP.

2.2.2.8. Open Pit

The Open Pit is the source of the PCCZ.

2.2.3. Pre-Operational Requirements

Not applicable

2.2.4. Operational Requirements

The discharging facilities shall be operated according to and inspected for the performance levels identified in Section 4.1, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION , and recorded in a log as required by Section 2.7.2. If damage is identified during an inspection that could cause or contribute to an unauthorized discharge pursuant to A.R.S. § 49-201(12), proper repairs shall be promptly performed in accordance with Section 2.6 of this permit and recorded in a log.

2.2.4.1. Low-grade Ore Leaching Pile, Gold Gulch Drainage and PLS Facilities

Until the construction of Gold Gulch No. 2 Process Solution Pond, Gold Gulch No. 1 and No. 1A PLS Ponds shall be inspected in accordance with Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION , daily to ensure there are no visible cracks, holes or leaks in liner; the discharge pump is in good working order; there is no evidence of seepage; a minimum of 2 feet of freeboard is maintained; the spillways are free of debris, sediments, vegetation, or other obstructions; there is no substantial erosion, subsidence, cracking or other damage to berm or dam; the collection sump pumps are working properly; the backup power generator is in good working order; there is no impairment of access to leak detection and gravity drain system; and that the leak detection and gravity drain system is in good working order. These facilities shall also be inspected annually and after every rainfall greater than or equal to 3 inches in 24 hours to verify that liquid storage facility is maintained at 80 percent of design volume.

2.2.4.1.1. Raffinate Pond

The Raffinate Pond shall be inspected weekly in accordance with Section 4.1, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION to ensure there is no substantial

erosion, subsidence, cracking, piping soughing, or sliding of dams and berms; no visible seepage from dams and berms; and at least 2 feet of freeboard as measured from the pond gauge.

The Raffinate Pond shall be operated to contain normal operating pond process solution volume plus the storm volume associated with the 100-year, 24-hour storm event. Embankment integrity and the pond access shall be maintained so that operation of the pond and BADCT design are not impaired; conveyances and diversions shall not have excessive erosion; and accumulated debris in conveyances and diversions shall be removed when fluid flow is impaired. Pumps, valves, and structures for pump operation and structural integrity shall be inspected at pump locations.

2.2.4.1.2. Low-grade Ore Leaching Piles

The Low-grade Ore Leaching Piles are irrigated with raffinate up to a rate of approximately 7,600 gpm. The PLS produced in the Low-grade Ore Leaching Piles flows to the head of Gold Gulch from beneath the piles and is currently captured in Gold Gulch No. 1 PLS Pond. Upon construction, PLS will be transported via pipelines to the Gold Gulch No. 2 Process Solution Pond.

2.2.4.1.3. Gold Gulch PLS Ponds (No. 1 and 1A)

Until the construction of Gold Gulch No. 2 Process Solution Pond, Gold Gulch No. 1 PLS Pond shall capture PLS from the Low-grade Ore Leaching Piles. PLS shall be collected at the toe of the leach piles in the PLS pond and be pumped to the SX-EW Plant for processing. Entrained solids in the PLS sink to the bottom of Gold Gulch No. 1 PLS Pond under the influence of gravity. This settling process reduces sediment content in the PLS, which prevents restriction of the flow of PLS from Gold Gulch No. 1 PLS Pond into Gold Gulch No. 1A PLS Pond.

2.2.4.2. Seepage/Stormwater Retention Facilities

The No. 1 Upper Basin, No. 1 Lower Basin, Upper Catchment/Upper Pond, Upper Catchment/Lower Pond, East Catchment and East Catchment Caisson, West Catchment, and the Gold Gulch Dam No. 2 and Reservoir shall be inspected weekly to ensure there is no substantial erosion, subsidence, cracking, piping, sloughing, or sliding of dams and berms; no visible seepage from dams and berms; pumps in good working order; that backup power supply is operational; there are no exceedances of BMP-required surge capacity; and that a minimum of 2 feet freeboard is maintained. These facilities shall also be inspected annually and after every rainfall greater than or equal to 3 inches in 24 hours or after a natural disaster to check for unexpected or sudden losses of fluids and to verify that liquid storage in the facility is maintained at 80 percent of design volume.

Upper Tule Pond, Lower Tule Pond, North Pond, Peeples Pond, Slack/Conklin Pond, Canyon Dam, Able Pond, Gold Gulch Final Catchment, Baker Pond, Rosa's Pond, and the Cottonwood Reservoir shall be inspected weekly to ensure there is no substantial erosion, subsidence, cracking, piping, sloughing, or sliding of dams and berms; no visible seepage from dams and berms; and a minimum of 2 feet of freeboard shall be maintained. These facilities shall also be inspected annually and after every rainfall greater than or equal to 3-inch in 24 hours or after a natural disaster to check for unexpected or sudden losses of fluids.

The No. 1 Seepage Toe Drain and Caisson, Lower Tule Caisson, Cottonwood Seepage Caisson System, and the East Catchment Caisson shall be inspected weekly to ensure that they are free of debris, sediments, vegetation, or other obstructions; there is no impairment of access; that the system is working properly, that pumps are in good working order; and that the backup power supply is operational.

Stormwater runoff that has come in contact with mining-impacted areas shall be reclaimed and recycled to the mill process water system. Stormwater that has not come in contact with impacted ground will be segregated by diversion ditches and barriers and prevented from commingling with seepage water or mining-impacted water. The un-impacted stormwater will be allowed to exit the site.

2.2.4.3. Tailings Storage Facilities

TSF1 and TSF2 were operated in accordance with the APP application and are inspected quarterly to ensure there is no visible evidence of crest failure, no visible slips at the toe, and no substantial cracks or erosion features. Quarterly inspections shall be performed to verify that standpipe piezometers and vibrating wire piezometers are operating properly and have no obstructions. Inspection monitoring results and any corrective actions shall be documented in the Log Book and included in the Annual Report. Results of standpipe and piezometer monitoring shall be summarized in the Annual report.

TSF3 and TSF4 shall be operated in accordance with the APP application and inspected quarterly to ensure that there is no visible evidence of crest failure, no visible slips at the toe, and no substantial cracks or erosion features. The berms shall be inspected monthly for structural integrity. The tailings impoundment and associated decant ponds shall be inspected monthly and after a significant storm or natural disaster to ensure that a minimum two feet freeboard is maintained. Quarterly inspections shall be conducted to verify that standpipe piezometers and vibrating wire piezometers are operating properly and have no obstructions. Quarterly inspections shall be conducted on open standpipe piezometers and vibrating wire piezometers for proper operation and no obstructions. The average annual deposition volume shall be monitored to ensure that the Maximum Deposition Limit (MDL) does not exceed 32,000,000 tons for TSF3 and TSF4. Inspection monitoring results and any corrective actions shall be documented in the Log Book and included in the Annual Report.

The ultimate dam height shall not exceed 3,860 feet amsl at TSF3 and 4,250 feet amsl at TSF4 at the end of mining.

2.2.4.4. Waste Rock Dumps

Waste rock from the Open Pit mining operation shall be deposited in appropriate areas where stormwater run-on is diverted and runoff is contained and in accordance with this permit and the mine plan. Waste rock dumps shall be inspected quarterly to ensure there are no substantial slips at the toe and no substantial evidence of crest failures.

Stormwater run-on/runoff control features shall be inspected monthly and after significant storm events to ensure that stormwater control features and berms are maintained to divert run on and prevent stormwater from ponding on closed in-place facilities and that no visible erosion or other damage that may impact berm integrity or stability is present.

Berm integrity and bank storage shall be inspected monthly for visible structural damage, breach, erosion of embankments that compromise structural integrity or seepage and to verify that sufficient storage capacity is available.

2.2.4.5. Concentrator Area

Ore shall be crushed and concentrated to minimize contact with natural stormwater runoff. Copper concentrate shall be dewatered and contained for transport to an off-site smelter. Unauthorized discharges from this area shall be addressed under Section 2.6.3 of this permit. Facilities shall be maintained and inspected on a weekly basis. Runoff from the Concentrator Area shall be contained, reclaimed and recycled back into the process water control system.

2.2.4.6. Wastewater Treatment Plant

The wastewater treatment plant shall be operated in accordance with the manufacturer's operation and maintenance procedures. The facility has the design capacity to treat 25,000 gallons per day. The facility will be inspected monthly for visible structure damage and proper operation. The facility shall be inspected after significant storm events to ensure stormwater run-on/runoff control features are maintained to prevent stormwater ponding.

2.2.4.7. Open Pit

The permittee shall be authorized to store stormwater and/or process water in the Open Pit during operations and temporary cessation. The water level in the pit shall not exceed an elevation of 3,270 feet amsl except for brief periods of time during emergency situations. This stored water may be reclaimed to the extent practicable or allowed to evaporate if uses for it cannot be found. If the water level in the pit rises above 3,270 feet amsl, follow contingency requirements per Section 2.6.2.7.

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, berm breaches that result in an unexpected loss of fluid, accidental spills, or other unauthorized discharges. The discharge limits (DLs) in this section are not applicable to any discharge caused by precipitation in excess of a single 100-year, 24-hour storm event or a process overflow during a power outage exceeding 24 hours in duration.

2.3.1. Low-grade Ore Leaching Piles, Gold Gulch Drainage and PLS Facilities

The drainage system for the Low-grade Ore Leach Piles shall be constructed and operated in a manner to ensure adequate capacity to manage draindown solutions and stormwater runoff and direct it to the open pit and/or designated impoundments (ponds), respectively. Residual leach materials and fluids shall not leave the leach piles or overtop the berms.

2.3.1.1. Raffinate Pond

Inflow to the Raffinate Pond shall not exceed the storage capacity of 23.0 acre-feet. Discharge from the Raffinate Pond shall be intercepted and monitored at Seep MG1-7a, which has ALs specified in Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS and Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS.

2.3.1.2. Low-grade Ore Leaching Piles

Dump leaching shall be restricted to the Low-grade Ore Leaching Piles and associated solution collection and transport ditches, PLS ponds, and raffinate pond, as specified in the approved plans and designs contained in the original APP application.

A dilute sulfuric acid dump leach process shall be used as described in the approved plans submitted with the original APP application. Catalysts and oxidizing reagents may be added per Section 2.2.1.1.2. Leached ore generated by dump leach processing shall not be removed from the dump leach areas. Removal or transfer of leached ore, except for purposes of pilot-scale testing or closure, shall be considered a major modification to the facility and require permit amendment and ADEQ approval.

2.3.1.3. Gold Gulch PLS Impoundments and Dams

Discharge shall be restricted to the alert levels listed in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING for the LCRS of Gold Gulch No. 1A PLS Pond, and upon construction, the alert levels listed for the Gold Gulch No. 2 Process Solution Pond.

The permittee is currently authorized to discharge the following solutions into Gold Gulch No. 1A PLS Pond and upon construction the solutions shall be routed to the Gold Gulch No. 2 Process Solution Pond:

1. PLS derived from dump leaching operations at the PVM of materials obtained from the PVM

and leaching of waste and ore materials from the remediation of the former Gibson Mine;
2. Stormwater runoff derived from the leach dumps at the PVM;
3. Solutions pumped from Gold Gulch Dam No. 2 and Reservoir, including stormwater runoff, are currently authorized to be routed to the Gold Gulch 1A PLS Pond. Following the construction of the Gold Gulch No. 2 Process Solution Pond, the solutions recovered from the LCRS, may be recirculated back into the Gold Gulch No. 2 Process Solution Pond;
4. Solutions derived from upset conditions or stormwater from the tailings, leaching, and other mine process facilities; and
5. Solutions from the Gold Gulch No. 1 PLS Pond (until this facility is closed in-place).

2.3.2. Seepage/Stormwater Retention Facilities

The permittee shall construct, operate, and maintain the seepage/stormwater collection facilities consistent with the design and operational practices described in the approved plans submitted with the original APP application and amendments.

Able and Baker Ponds and Gold Gulch Final Catchment may receive discharges of tailings from the tailings slurry line under an upset condition.

2.3.3. TSF2, TSF3, and TSF4

The permittee shall be restricted to a total annual maximum deposition of 32,000,000 tons of tailings by dry weight from Pinto Valley's copper extraction flotation process according to Section 4.2, Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4) in TSF3 and TSF4. Total deposition of tailings over the life of the facility shall not cause the ultimate dam height to exceed an elevation of 3,860 feet amsl at TSF3 and an elevation of 4,250 feet amsl at TSF4.

All tailings deposited at the permitted site shall be derived from the flotation process at the Pinto Valley Concentrator as referenced in Component B of the original APP application.

2.3.4. Waste Rock Dumps

Runoff from waste rock dumps shall be contained by downstream seepage/stormwater retention facilities as described in the approved plans submitted with the original APP application. Potentially acid-generating waste rock deposited in tailings shall be enclosed in non-acid generating waste rock overlying fine-grained tailings.

Table 2: WASTE ROCK DUMP CAPACITY

Facility	Storage Capacity Not to Exceed (tons)
Northside Dump 9.1	680,000
Northside Dump 9.11	13,500,000
Northside Dump 9.12	560,000
Northside Dump 9.3	9,000,000
Southside Dump 13	1,000,000
19 Dump	27,000,000
19.1 Dump	1,000,000
19 Extension	19,000,000
Castle Dome Marginal Dump	10,000,000
Main Dump	419,900,000
West Dump	153,000,000

2.3.5. Concentrator Area

Runoff from the Concentrator Area shall be contained by downstream seepage/stormwater retention facilities as described in the approved plans submitted with the original APP application.

2.3.6. Open Pit

The permittee shall be authorized to store stormwater and/or process water in the Open Pit during operations and temporary cessation. The water level in the pit shall not exceed an elevation of 3,270 feet amsl except for brief periods of time during emergency situations. This stored water may be reclaimed to the extent practicable or allowed to evaporate if uses for it cannot be found.

2.3.7. Wastewater Treatment Plant

The permittee is authorized to operate the WWTP with a maximum average daily flow of 25,000 gpd. Specific DLs are listed in Section 4.4, Table 21: ROUTINE DISCHARGE MONITORING – WWTP.

The permittee shall notify all users that the materials authorized to be disposed of through the WWTP are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers, or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.

2.4. POINT OF COMPLIANCE (POC)

[A.R.S. § 49-244]

The POC wells are established at the following monitoring locations:

Table 3: POINT(S) OF COMPLIANCE		
POC	**LATITUDE**	**LONGITUDE**
GROUNDWATER POC MONITORING WELLS		
APP-1A (TSF4, above fault zone)	33° 27' 25" N	110° 58' 43" W
APP-1Br (TSF4, below fault zone)	33° 27' 25" N	110° 58' 43" W
APP-2 (TSF4, Eastwater Canyon)	33° 27' 16" N	110° 59' 46" W
APP-3A (Gold Gulch)	33° 25' 34" N	110° 59' 59" W
APP-3B (Gold Gulch)	33° 25' 34" N	110° 59' 59" W
APP-4 (TSF3)	33° 25' 21" N	111° 00' 03" W
APP-5A (No. 1 Seepage Toe Drain and Caisson)	33° 23' 42" N	110° 59' 07" W
APP-5B (No. 1 Seepage Toe Drain and Caisson)	33° 23' 42" N	110° 59' 07" W
APP-6 (Miller Gulch)	33° 23' 36" N	110° 58' 57" W
SPRING GROUNDWATER POC MONITORING POINTS		
North Draw 1 (also known as Spring North Draw)	33° 25' 38" N	111° 00' 00" W
MG1-6b (also known as Homestead Springs)	33° 24' 54" N	111° 00' 05" W

Alert level monitoring wells are established at the following locations:

Table 4: ALERT MONITORING LOCATIONS		
SPRINGS/SEEPS		
MG1-12b (also known as Spring Gold Gulch 1)	33° 25' 31" N	110° 59' 43" W
MG1-7a (also known as Raffinate Pond Monitoring Point)	33° 24' 33" N	110° 59' 17" W
ALERT WELL		
APP-7 (Gold Gulch)	33° 22' 58" N	110° 59' 25" W

Monitoring requirements for each POC and alert monitoring location are listed in Section 4.3, Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS, Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, and Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS.

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 immediately available for review by ADEQ personnel.

2.5.1. Facility / Operational Monitoring

The operational requirements for all discharging facilities are presented in Section 2.2.3 and summarized in Section 4.2 Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING, Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4), Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION Table 14: PIEZOMETER MONITORING, and Table 15: PIT CONTAINMENT MONITORING. A Log Book of all inspections shall be kept at the facility for 10 years from the date of each monitoring event or inspection, available for review by ADEQ personnel. If routine compliance monitoring indicates that operational limits have been exceeded, the permittee shall follow the requirements of the contingency plan in Section 2.6. All freeboard measurements shall consist of the vertical distance between the fluid surface and the lowest point on the berm of the pond. If damage to the pollution control structures that may cause a discharge as defined in A.R.S. 49-201(12) is identified during an inspection, proper repair procedures shall be performed. All repair or modification procedures and material(s) used shall be documented in a Log Book or similar. If no damage to the pollution control structures is identified during the quarter, the permittee shall indicate that the required inspections occurred.

2.5.1.1. PLS and Raffinate Processing Facilities

The raffinate used to leach ore is currently collected as PLS in Gold Gulch No. 1 and Gold Gulch No. 1A PLS Ponds. The LCRS of the Gold Gulch No. 1A PLS Pond shall be monitored and reported according to the terms and frequencies in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING.

After construction of Gold Gulch No. 2 Process Solution Pond, the Gold Gulch No. 1 PLS Pond will be removed such that raffinate used to leach ore will be collected as PLS in Gold Gulch No. 2 Process Solution Pond. The LCRS of the Gold Gulch No. 2 Process Solution Pond shall then be monitored and reported according to the terms and frequencies in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING.

2.5.1.1.1. Gold Gulch PLS Pond Liner Leakage Monitoring

The respective LCRS shall be monitored on a continuous basis for liner leakage and records shall be maintained of the volumes pumped in a Log Book, and compared to the alert levels (ALs) as specified in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING.

2.5.1.2. Tailings Impoundments and Ponds

Tailings generated by Pinto Valley's Concentrator shall be monitored and results of monitoring recorded annually in the site Log Book according to the terms and frequencies in Section 4.2, Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4). Any exceeded values shall be reported in

accordance with Section 2.7.3 (Permit Violation and Alert Level Status Reporting). The total average annual deposition volume into both TSF3 and TSF4 shall be monitored and reported according to the terms and frequencies in Section 4.2, Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4).

2.5.1.3. Facility Operation and BADCT Performance Inspection

BADCT associated with each APP-regulated discharging facility, shall be inspected according to the requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION . A Log Book of all inspections shall be kept at the facility for 10 years from the date of each monitoring event or inspection, available for review by ADEQ personnel in accordance with Section 2.7.2. If compliance monitoring indicates that operational limits have been exceeded, the permittee shall follow the requirements of the contingency plan in Section 2.6.

2.5.1.4. Routine Discharge Monitoring for the Wastewater Treatment Plant

Routine discharge monitoring of the WWTP shall be conducted in accordance with Section 4.4, Table 21: ROUTINE DISCHARGE MONITORING – WWTP.

2.5.1.5. Passive Containment Capture Zone (PCCZ)

Based on supporting documentation provided, the permittee has satisfactorily predicted that the Pinto Valley Open-Pit will create a "passive containment capture zone," as per A.R.S. § 49-243(G). Passive containment, per A.R.S. § 49-243(G)(1), means natural or engineered topographical, geological or hydrological control measures that can operate without continuous maintenance. Monitoring and inspections to confirm performance of the passive containment do not constitute maintenance.

A post-audit of the approved groundwater flow model shall be conducted every five (5) years in accordance with Compliance Schedule Item No. 1 and Section 2.7.4.4. Factors to be evaluated in the post-audit include groundwater inflow, the estimated static water level in the pits, the estimated time to reach static water level, and any potential for the water level in the pit to rise to an elevation where the hydraulic gradient reverses and the pit ceases to function as a passive containment. The passive containment modeling projections shall be based solely on natural or engineered topographical, geological, or hydrological control measures that can operate without continuous maintenance (A.R.S. § 49-243(G)(1).

Every five (5) years thereafter, the permittee shall compare the current groundwater data to the previous model predictions. The assumptions about mine development and infiltration shall be reviewed in terms of the actual changes in the pit configuration, leaching areas, leach rates, sump locations, water balance, annual precipitation and storm events. The resulting compilation shall be compared to predictions provided by the groundwater flow model for the previous calibration period.

2.5.2. Groundwater Monitoring and Sampling Protocols

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.

2.5.2.1. Routine Groundwater Monitoring in POC Wells

Groundwater monitoring of wells listed in Section 4.3, Table 16: MONITOR WELL LOCATIONS AND MONITORED FACILITIES FOR GROUNDWATER MONITORING shall be performed on a quarterly basis and a biennial (every 2 years) basis for wells and constituents listed in Section 4.3, Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, and Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS,. SMRFs shall be submitted to ADEQ in accordance with reporting frequencies specified in Section 2.7.6.

2.5.2.2. Routine Monitoring in POC Springs

Groundwater monitoring shall be performed on a quarterly and biennial in accordance with Section 4.3, Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS and Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS to assess groundwater quality in POC springs North Draw 1 and MG1-6b (also known as Homestead Springs). SMRFs shall be submitted to ADEQ in accordance with reporting frequencies specified in Section 2.7.6.

2.5.2.3. Routine Groundwater Alert Level Monitoring and Seep Monitoring

Groundwater monitoring shall be performed on a quarterly and biennial basis in accordance with Section 4.3, Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS, and Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS to assess groundwater quality in the well APP-7, and in seeps MG1-7a (Raffinate Pond) and MG1-12b (Spring Gold Gulch). SMRFs shall be submitted to ADEQ in accordance with reporting frequencies specified in Section 2.7.6.

2.5.2.4. Point of Compliance 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 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 2.5.2.6 and Section 2.5.2.7 of this permit.

2.5.2.5. Ambient Groundwater Quality Monitoring for Point of Compliance Wells

Not applicable.

2.5.2.6. Alert Levels for Point of Compliance Wells

ALs shall be calculated for all contaminants with an established numeric AWQS. For any new or replacement POC wells, ALs shall be calculated for all contaminants with an established numeric AWQS, as described below.

Following receipt of the laboratory analyses for the final month of the ambient groundwater monitoring period for each new or replaced POC well, 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 4.3, Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS and Table 19: BIENNIAL

GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS 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.

2.5.2.7. 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.

2.5.3. Surface Water Monitoring and Sampling Protocols

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

2.5.4. 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

2.5.5. 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 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

At least one copy of this permit and the contingency and emergency response plan 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 plans.

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, 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 has been conducted.

The permittee shall be 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

2.6.2.1.1. Performance Levels Set for Freeboard

In the event that freeboard performance levels established in Section 4.2, Table 10: PERMITTED FACILITIES AND BADCT and Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION 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.

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.

2.6.2.1.2. Performance Levels, other than Freeboard

1. If an operational performance level (PL) listed in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION has not been maintained during required inspection and operational monitoring, such that the result could cause or contribute to an unauthorized discharge, the permittee shall immediately investigate to determine the cause of the condition. 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 Value Stream, 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. The permittee shall initiate actions identified in the contingency plan referenced in Section 5 and any specific contingency measures to resolve any 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.

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

If an Alert Level 1 (AL1) as specified in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING, has been exceeded, the permittee shall take the following actions:

1. Within 5 days of AL #1 exceedance, notify Groundwater Protection Value Stream 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 Value Stream 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 Value Stream 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 Reporting) 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 Value Stream. 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.

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

If the Liner Leakage Discharge Limit (AL2) specified in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING has been exceeded, the permittee shall:

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 Value Stream within 24-hours of the AL #2 exceedance.
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 Value Stream 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, shall be referenced in the next annual report described in Section 2.7.4.1 (Annual Reporting) of this permit.

2.6.2.4. Exceeding of Alert Levels Set for Discharge Monitoring

Not applicable.

2.6.2.5. TSF Slope Conditions

The permittee shall monitor TSF1, TSF2, TSF3, and TSF4 for general slope conditions as per Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION to identify unusual scour or degradation of materials, sloughing, rolling rocks or visible seepage. If any of TSF1, TSF2, TSF3, or TSF4 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.

2.6.2.6. TSF Piezometric Head

Piezometers are installed in TSF1, TSF2, TSF3, and the adjoining TSF3 North Embankment Buttress, and TSF4 to monitor pore pressures and the phreatic surface within the tailings to ensure stability. The phreatic surface in the piezometers shall be measured to ensure that it is maintained within safe operating limits per Section 4.2, Table 14: PIEZOMETER MONITORING. If the piezometers read a phreatic surface in excess of the limits presented in Section 4.2, Table 14: PIEZOMETER MONITORING, the permittee shall take the following actions:

1. Notify the design engineer.
2. Monitor the phreatic surface within the TSF that exceeded the "Alert Level for Phreatic Surface" in Table 14.
3. Initiate an evaluation to determine the cause of the incident. Identify the circumstances that resulted in the elevated phreatic surface. Implement corrective actions including pumping, if necessary, to resolve the problems identified in the evaluation.
4. If necessary, perform a slope stability analysis for the TSF with the elevated phreatic surface to determine if any reduction in safe operation of the facility has occurred.
5. Record in the facility Log Book, the piezometer number, reading and location. Hydrographs of this and all other piezometers will be recorded on at least a monthly basis to allow quick inspection and evaluation of historic facility operations.

2.6.2.7. Open Pit Water Level

Water level in the pit shall remain at or below an elevation of 3,270 feet amsl. If the water level rises above 3,270 feet amsl, the permittee shall take the following actions:

1. If the water level within the pit exceeds the 3,270 feet amsl due to an emergency for a period of less than thirty days, the permittee shall note the exceedance in the Log Book and no further action is required.
2. If the water level within the pit exceeds the 3,270 feet amsl for greater than thirty (30) days,

the permittee shall:

a. Notify ADEQ immediately after the thirty day period.

b. Request approval for the exceedance from ADEQ and provide a schedule that describes actions that will be taken to reduce the water level below the permissible pit level of 3,270 feet amsl. Indicate where the water will be reclaimed, and if necessary, how it will be treated before being reclaimed.

c. If evaporation is the chosen method to reduce the water level in the pit, the permittee shall provide an analysis of the amount of time that will be required to reduce the water level in the pit to the permissible level. In the evaluation report, the permittee shall determine the following:

i. Whether the PCCZ is maintained during the time required to evaporate the water from the pit.

ii. If the PCCZ is not maintained, the impact to BADCT for each facility within the PCCZ.

3. Within 30 days of the water levels dropping below the permissible limit of 3,270 feet amsl, the permittee shall submit a report describing the exceedance and any actions performed to remedy the situation per Section 2.7.3.

2.6.2.8. Exceeding of Alert Levels in Groundwater Monitoring, Seep and Spring Monitoring

2.6.2.8.1. Alert Levels for Indicator Parameters

Monitoring for Indicator Parameters is not required under the terms of this permit.

2.6.2.8.2. Alert Levels for Pollutants With Numeric Aquifer Water Quality Standards

1. If an AL for a pollutant set in Section 4.3, Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS, Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, or Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS 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 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 an AL exceedance may be reduced to pre-alert frequency if the results of three 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 six sequential sampling events, the permittee shall submit a second report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth sampling event.

2.6.2.8.3. Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards

Not applicable for this permit.

2.6.2.8.4. Alert Level for Groundwater Level

Not applicable for this permit.

2.6.3. Discharge Limit Violation

2.6.3.1. Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid

In the event of overtopping, liner failure, containment structure failure, or unexpected loss of fluid that results in a discharge pursuant to A.R.S. § 49-201(12),, 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 Value Stream.
3. Within 24 hours of discovery of a failure, or as practicable, estimate the quantity released, collect representative samples of the fluid remaining in affected impoundments and drainage structures, analyze sample(s) for parameters listed in Section 4.3, under the quarterly and biennial monitoring tables. Should the permittee determine that these actions cannot be performed within 24 hours of discovery, as practicable, document the reasons in the Log Book and the subsequent 30-day report, as necessary. 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 Value Stream.
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/Recordkeeping File).

5. Within 30 days of discovery of the incident, submit a report to Groundwater Protection Value Stream as specified in Section 2.7.3. Include a description of the actions performed in Subsections 1 through 4 listed above. Upon review of the report, ADEQ may request additional monitoring or remedial actions.

6. Within 60 days of discovery, conduct an assessment of 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.

7. 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).

8. 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 24 hours, or as practicable, collect representative samples of the fluid contained in the surface impoundment. Should the permittee determine that these actions cannot be performed within 24 hours of discovery, as practicable, document the reasons in the Log Book and the subsequent 30-day report, as necessary. Samples shall be analyzed for the parameters listed in Section 4.3, under the quarterly and biennial monitoring tables. 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 4.1, Table 10: PERMITTED FACILITIES AND BADCT and Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION . 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/Log Book/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 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 5 listed above. Upon review of the report, ADEQ 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 ADEQ 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 ADEQ, the permittee shall implement the approved plan.

9. Within 30 days of completion of corrective actions, submit to ADEQ, a written report as specified in Section 2.6.6 (Corrective Actions). 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.

2.6.3.3. 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 Value Stream.

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.

2.6.3.4. Waste Rock Dump Failures

Mitigating actions for the waste rock dumps shall be initiated if there is evidence of any of the following conditions: measurable slips at the toe of a waste rock dump, evidence of a crest failure, evidence of breaching of stormwater run on/runoff control features and berms protecting closed facilities, ponding on closed facilities, evidence of visible erosion or other damage that may impact berm integrity or stability. Any toe slips and crest failures at waste rock dumps or damage to the stability or integrity of stormwater controls associated with waste rock dumps identified during regular inspections required in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION shall be repaired as soon as practicable.

Mitigating actions shall include repairing the affected facility, removing discharged material that has the potential to affect the aquifer, and other actions necessary to meet permit requirements.

2.6.3.5. Slope and Berm Failures

If a slope or berm failure involving leach facilities, waste rock dumps, tailings facilities, surface impoundments or retention structures (dams) occurs which affects the ability of the facility to operate in accordance with this permit or results in an unauthorized discharge, the permittee shall promptly close the active area in the vicinity of the failure, and conduct a field investigation of the failure to analyze its origin and extent, its impact on the facility operations, temporary and permanent repairs and changes in operational plans considered necessary. Within 30 days of a slope or berm failure, the permittee shall submit a written report which includes the documentation specified in Section 2.7.3 of this permit. The permittee shall initiate the actions necessary to mitigate the impacts of the failure, consistent with Department approval.

2.6.3.6. Maximum Deposition Limit (MDL) Violation

The permittee shall notify the Department in accordance with Section 2.7.3, should a MDL as specified in Section 4.2, Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4) be violated. The permittee shall submit a written report which includes the documentation specified in Section 2.7.3 of this permit if the MDL is exceeded.

2.6.4. Aquifer Quality Limit Exceedances

1. If an AQL set in Section 4.3, Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS, Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS, or Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS for a POC Well 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 exceedance. The permittee may use results of another sample taken between the date of the last sampling event and the date of receiving the result as verification. If verification sampling does not verify the exceedance, the initial exceedance shall be reported in the Annual Monitoring and Compliance Report and no further action is required by the permittee for that event.
2. If verification sampling does not confirm an AQL exceedance, no further action is needed under this Section.
3. If verification sampling confirms that an AQL was exceeded for any parameter or if the permittee opts not to perform verification sampling, then, the permittee shall increase the frequency of monitoring for those parameters as follows:

Table 5: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION	
Specified Monitoring Frequency	**Monitoring Frequency for AQL Violation**
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually	Quarterly

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 30 days 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 the contingency plan, or separately approved according to Section 2.6.6.

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

4. If the exceedance continues for 120 days, the permittee shall notify any downstream or down gradient users who may be directly affected by the discharge.
5. The permittee shall continue monitoring at the increased frequency until the contaminant(s) are below the AQL and AL for three consecutive months.

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 Value Stream 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 Value Stream 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 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 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 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 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, 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. 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, and submit the form to the Groundwater Protection Value Stream.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
    a. Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS

b. Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS
c. Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS
d. Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS

The parameters listed in the above-identified tables from Section 4.0 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 A.A.C. R18-9-A206(B)(2).
8. Results of routine inspections performed in accordance with Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION.

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection Value Stream within five (5) days (except as provided in Sections 2.6.2.7 and 2.6.5) 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 Value Stream 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 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION in the facility Log Book as per Section 2.7.2, and report to the Groundwater Protection Value Stream any violations or exceedances as per Section 2.7.3. If none of the conditions occur, the report shall say “no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate that fact in the Log Book. The permittee shall submit data required in Section 4.2 and 4.3 tables regardless of the operating status of the facility unless otherwise approved by the ADEQ or allowed in this permit.

2.7.4.1. Periodic Reporting

As required by this permit, the permittee shall submit Annual Reports for various forms of monitoring performed under this permit. Each year the permittee shall submit an Annual Report to the Groundwater Protection Value Stream summarizing the results of the Facility’s performance monitoring for the calendar year in accordance with the table in Section 2.7.6.

Results of piezometer monitoring at the Tailings Impoundments shall be summarized in the Annual Report.

If an alert level (AL1 or AL2) is exceeded in Section 4.2, Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING, follow repair and annual reporting protocols as per Section 2.6.2.2 and 2.6.2.3. In the Annual Report, provide a discussion of any AL1 or AL2 exceedances and actions performed to address the exceedances.

The report shall be divided into Groundwater, Discharge and BADCT Monitoring and Compliance Status (a summary of all permit exceedances and violations if any and response actions taken). The report shall also include identification and discussion of any laboratory results that fell outside of the laboratory QA/QC criteria and AQLs and ALs required by this permit. Response actions for BADCT performance monitoring shall be summarized in this report for any exceeded performance monitoring as described in (2) below.

Once the West Dump is constructed and concurrent reclamation activities begin at that facility, the annual report shall include a technical memorandum prepared by the Engineer of Record (EOR) providing an update of concurrent reclamation activities performed in the preceding calendar year at the West Dump.

Appropriate components of the report required by this Section shall be sealed by an Arizona-registered professional geologist or registered professional engineer, in accordance with Arizona Board of Technical Registration (BTR) requirements. If an Alert Level #1 has been exceeded as discussed in Section 2.6.2.2, 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; and a table summarizing alert level exceedances including the frequency and quantity of fluid removed, and corrective actions taken.

2.7.4.2. Well Installation Reports

A well installation report shall be submitted to ADEQ within 90 days of the completion of any new well installations in accordance with Section 2.4 of this permit and the Compliance Schedule in

Section 3.0. Well installation reports shall be sealed in accordance with Arizona BTR requirements and shall include the following:

1. Arizona Department of Water Resources (ADWR) Notice of Intent (NOI) and Well Drilling Report;
2. Boring log and well as-built diagram;
3. Total depth of well measured after installation;
4. Top of well casing or sounding tube (whichever is used as the fixed reference measuring point) and ground surface elevation;
5. Geophysical logging reports and subsurface sampling results;
6. Description of well drilling method;
7. Description of well development method;
8. Summary of analytical results for initial groundwater sample collected after installation; and
9. GPS coordinates for each new well.

2.7.4.3. Well Abandonment Reports

If monitor wells associated with this permit are abandoned due to poor performance, casing collapse, or other reasons, or are abandoned at the end of the post-closure period, then within 90 days of completing abandonment, the permittee shall submit a well abandonment report to Groundwater Protection Value Stream. Appropriate contents of the report shall be sealed by an Arizona professional geologist or professional engineer, in accordance with BTR requirements. Well abandonment records shall be provided to ADEQ within 90 days of monitor well abandonment and shall include:

1. Copies of ADWR NOI to Abandon;
2. Copies of ADWR Abandonment Reports;
3. A description of the methods used to seal the well casing and the perforated or screened interval of the well; and
4. GPS coordinates of the former well location.

2.7.4.4. PCCZ Demonstration Reporting

Every five years, the permittee shall submit a report that evaluates the following: 1) Assess the adequacy of POC monitoring well locations; 2) Evaluate the adequacy of the groundwater monitoring program; 3) Evaluate BADCT performance as observed in groundwater monitoring; and 4) Conduct a post-audit of the PCCZ demonstration. The results of these four evaluations shall be submitted to the Groundwater Protection Value Stream for review in a report. The post-audit evaluation shall summarize the original passive containment demonstration and any updates or revisions made to the model in accordance with Compliance Schedule Item 1 and Section 2.5.1.5. Each post-audit report shall include a revised table listing the groundwater elevations for the data points used to demonstrate the configuration of the hydraulic containment, flow vector analysis (including plan and cross-sectional figures at inflection points), and a potentiometric contour map based on groundwater elevations used in the post-audit demonstration. The Groundwater Protection Value Stream will determine whether a full model recalibration is required. If a recalibration is necessary, a report

describing the model output and the revisions and/or changes to the model shall be submitted to the Groundwater Protection Value Stream. The permittee shall compare the current groundwater data to the previous model predictions and a report on the comparison shall be submitted to the Groundwater Protection Value Stream for review.

2.7.4.5. Tailings Impoundment Reporting

The permittee shall submit a biennial technical report to the Groundwater Protection Value Stream that is prepared, signed and sealed by the Engineer of Record. This report shall be due as specified in Section 3.0, Compliance Schedule Item (CSI) No. 9. This report shall be appended to the annual report in CSI No. 2 on years with an even number, and shall include the following:

1. A summary of Tailings Storage Facilities TSF1, TSF2, TSF3, and TSF4 construction activities for the reporting period including maps and construction completion documents such as as-built documentation and construction quality control summary.

2. A summary of construction activities planned for the upcoming 2 years period.

3. Summary of findings including maps, graphs and figures related to TSFs stability and performance resulting from inspections and monitoring activities.

4. Description of any updates to the TSFs stability model and updates to the credible failure modes analysis.

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 groundwaterpermits@azdeq.gov or the address listed below:

The Arizona Department of Environmental Quality
Groundwater Protection Value Stream
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6. Reporting Deadline

The following table lists the quarterly report due dates:

Table 6: QUARTERLY 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 biennial SMRF report due date per Section 2.7.1:

Table 7: BIENNIAL REPORTING DEADLINES	
Monitoring Conducted:	**Report Due By:**
January-December	January 30, 2023, and every two years thereafter

The following table lists the due date for the periodic report per Section 2.7.4.1:

Table 8: PERIODIC REPORTING DEADLINES	
Monitoring Conducted:	**Report Due By:**
January 1–December 31	April 30th of the following year

2.7.7. Changes to Facility Information in Section 1.0

The Groundwater Protection Value Stream 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 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 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)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection Value Stream 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 Value Stream, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

1. Contouring slopes to appropriate angles.
2. Reservoir, pond, and ditch closures.
3. Overall drainage control.
4. Cover waste rock piles containing potentially acid-generating material outside the model-predicted PCCZ with a minimum of 2 feet cover. Slopes of Main Dump that drain towards TSF4 will be recontoured and capped with 1 foot of cover.

These methods are detailed in the 2019 Closure and Post-Closure Strategy, Pinto Valley Mine.

If the closure plan achieves clean-closure immediately, ADEQ shall 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 Value Stream 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 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. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(30) and Title 49, Chapter 2, Article 3;
4. Further action is necessary to meet property use restrictions.
5. 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 Value Stream.

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(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.

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, including a cover letter that lists the compliance schedule items, to the Groundwater Protection Value Stream.

Table 9: COMPLIANCE SCHEDULE ITEMS

No.	Description	Due By:	Permit Amendment Required?
1	The permittee shall submit an update to the PCCZ demonstration, in accordance with Section 2.7.4.4.	November 20, 2024 and every five years thereafter.	No
2	Submit Annual Report in accordance with Section 2.7.4.1 of this permit.	Annually by April 30.	No
3	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.	June 30, 2028 and every 6 years thereafter for the duration of the permit.	Yes
4	Submit ADWR approval documents for breaching Gold Gulch 1A Dam	Within 14 days of getting ADWR approval.	No
5	Submit ADWR well abandonment reports for all abandoned wells and piezometers.	Within 90 days of abandonment.	No
6	Submit Construction Report including as-built plans and QA/QC documents sealed by an Arizona registered professional engineer for the construction of Gold Gulch No. 2 Process Solution Pond.	Within 90 days of completion of the construction.	No
7	Submit closure report of Gold Gulch No. 1 and Gold Gulch No. 1A PLS Ponds, and Lower Gold Gulch Caisson.	Within 90 days of completion of the closure activities.	No
8	Submit Construction Report including as-built plans and QA/QC documents sealed by an Arizona registered professional engineer for the upgraded Peeples Pond.	Within 90 days of completion of the construction.	No
9	The permittee shall submit the Biennial Monitoring Summary Report in accordance with Section 2.7.4.5. This report shall be appended to the annual report in CSI 2 in year with even numbers.	April 30, 2024, and every two (2) years thereafter for the duration of the permit.	No
10	The permittee shall submit construction QA/QC Report and as-built drawings, sealed by an Arizona registered professional engineer showing that the completed TSF3 North Embankment Buttress was constructed in accordance with plans and specifications approved by ADEQ.	Within 90 days of completion of the construction of each phase of the TSF3 North Embankment Buttress.	No
11	Permittee shall submit a report with the proposed locations of the piezometers in the TSF3 North Embankment Buttress and the phreatic surface alert levels for the proposed piezometers.	Within 90 days after the completion of the construction of the TSF3 North Embankment Buttress.	Yes

12	Submit material summaries of Tailings Dam Safety Reviews and ITRB Reviews including findings and recommended actions. Permittee shall include updates on the stability of the tailings dams to demonstrate that current stability and performance are consistent with design intent.	By January 31, 2025 and Every 5 years thereafter	No
13	The permittee shall provide a contingency plan with a site-specific analysis for the Tailings Storage Facilities using a methodology that considers credible potential failure modes, site conditions, and the properties of the discharge. This should cover: • Likelihood of failure (shall be assessed using industry-standard procedures. • Consequence of failure (potential loss of life, potential property damage) shall be assessed using industry standard procedures, including consideration of expected travel distance based on the release volume and the maximum embankment height. • The results of the analysis shall estimate the physical area impacted by a catastrophic failure scenario (Dam Breach Analysis). • The analysis of credible failure modes should inform the OMS plan.	Within one year of permit issuance and every 5 years thereafter.	No
14	Provide a detailed plan for the operations, maintenance, surveillance and monitoring of the Tailings Storage Facilities during operation, closure, and post-closure.	Within one year of permit issuance and every 5 years thereafter.	No
15	Permittee shall provide a drainage study for the West Catchment and Slack/Conklin Ponds after the completion of the modifications and the reduction in their storage to verify that they are providing sufficient storage per the design capacity.	1 year after the completion of the modifications to the capacity of the West catchment and Slack/Conklin Pond and annually for the next 5 years	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PERMITTED FACILITIES AND BADCT

Table 10: PERMITTED FACILITIES AND BADCT
Low-grade Ore Leach Piles, Gold Gulch Drainage and PLS Facilities
Currently, the Gold Gulch No. 1 PLS Pond, Gold Gulch No. 1A PLS Pond, and the North and south Spillways are all part of the overall Gold Gulch Drainage Facility. The system is designed for recovery of PLS from the low-grade ore leach piles, collection of PLS and conveyance of PLS to the SX-EW Plant. The North and South Spillways shall consist of a series of pumps, leaching piles, collection ponds, dams, and ditches designed to collect and recycle PLS and stormwater runoff. Upon construction of the lined Gold Gulch No. 2 Process Solution Pond, the Gold Gulch No. 1 PLS Pond and Gold Gulch 1A PLS Pond will be closed in-place.
Raffinate Pond The Raffinate Pond is located south of and adjacent to the SX-EW Plant. This pond was constructed by excavating into underlying limestone and was lined with a 6-inch low-permeability clay-soil-cement mixture that is compatible with the raffinate (Golder, 1998). The permeability of the liner was 1 x 10-6 centimeters per second (cm/sec) or less (Golder, 1998). The acidic solution (raffinate) from the SX-EW Plant is brought to the proper pH range by adding sulfuric acid before discharging to the Raffinate Pond. The raffinate is then pumped and applied to the Low-grade Ore Leaching Piles. The storage capacity is 23.0 acre-feet. The impoundment is designed and maintained so that the underlying rocks provide neutralization of normal seepage through the clay-soil-cement liner and for capture of seepage at APP-regulated facilities located downgradient to ensure that AWQS are not violated at a POC. Site-specific characteristics for this facility are described further in Section 2.2.2 of this permit. The facility is regularly inspected and maintained. Piping for PLS and raffinate solutions between the SX-EW Plant and the Low-grade Ore Leaching Piles was constructed of raffinate-compatible, high-density polyethylene (HDPE) and stainless steel to eliminate the potential for corrosion.
Low-grade Ore Leaching Piles During the leaching process, copper shall be extracted from the rock by passing an acidic solution (raffinate) from the Raffinate Pond through the leach piles. PLS from the Low-grade Ore Leaching Piles is currently collected in the Gold Gulch No. 1 and No. 1A PLS Ponds, and the PLS will be collected in the Gold Gulch No. 2 Process Solution Pond upon completion of construction. BADCT components shall include seepage detection and collection systems, collection ponds and ditches, stormwater controls, and contouring and covering at closure, as well as use of site-specific characteristics. Site-specific characteristics for this facility are described further in Section 2.2.2 of this permit. The chemical composition of the acidic leach solution is influenced by the leach and solvent extraction processes. Soluble elements from the Low-grade Ore Leaching Piles are dissolved as salts in the leach solution. The chemistry of the raffinate is adjusted as necessary to maximize the beneficial use of the Low-grade Ore Leaching Piles through the recovery of copper. The leach operations includes the use of a catalyst (not a leaching agent), which is an organometallic molecule which under the right conditions at very low concentrations allows leaching to occur. The catalyst removes a passivation layer (a copper depleted sulfur-iron layer) and prevents its formation allowing the lixiviant to access the mineral surface and therefore reactivate copper extraction. Additives considered beneficial to leach include sulfuric acid, iron, oxidizing reagents such as hydrogen peroxide or ozone, and reagents with thiocarbonyl functional groups. Monitoring wells are installed downstream of the Low-grade Ore Leaching Piles for the detection of any potential impacts to groundwater.
Gold Gulch Dam No. 2 and Reservoir (to be repurposed as a lined pond and renamed as "Gold Gulch No. 2 Process Solution Pond") The Gold Gulch Dam No. 2 and Reservoir is currently an unlined impoundment that is operated as a non-stormwater pond. The capacity of the reservoir is approximately 345 ac-ft. This facility receives overflows from other facilities, and it is sized to passively contain the 100-year, 24-hour storm event plus 25% and the Maximum Saturation Event (MSE) 5-day window from its drainage basin. This facility will be upgraded to a double-lined process solution pond with a total capacity of 420 acre-feet. The flow that will report to the repurposed Gold Gulch No. 2 Process Solution Pond will consist primarily of PLS from the upgradient dumps

Table 10: PERMITTED FACILITIES AND BADCT
conveyed in pipelines, which shall be installed in a trench beneath the West Dump. The flows will also include diverted stormwater from Gold Gulch facilities (i.e., Northside Dumps 9.1 and 9.11, the Main Dump and the underlying Low-grade Ore Leaching Piles) including the West Dump, and seepage that emanates from the toe of the West Dump. The pond construction from bottom up shall consist of engineered fill or compacted native material, a soil cushion layer and an underdrain system consisting of 6-inch perforated HDPE pipe housed in a 3 feet by 3 feet trench filled with ¾ inch drain rock, a double-sided geocomposite blanket drain, 60 mil HDPE secondary liner, a leakage collection and recovery system (LCRS) composed of 200 mil double-sided geocomposite layer sloped towards a LCRS sump, and 80 mil HDPE primary liner. Side slopes shall be no steeper than 2.5H:1V. The liner shall be secured in an engineered anchor trench around the impoundment perimeter. Currently, Gold Gulch stormwater shall be contained by Gold Gulch Dam No. 2 and Reservoir, which retain stormwater from Gold Gulch and the waste rock dumps. The dam was built in 1982. The dam shall be maintained as a rock-filled embankment approximately 100 feet high with a low-permeability clay core and a 3-foot-thick transition zone of tailings sand. The dam shall be 413 feet long with a crest width of 20 feet with a grout curtain to control seepage. The dam shall be designed and maintained to retain 206 acre-feet of water. Water collected behind the dam is pumped to the mill process water system for reuse via Tank 16 (APP-exempt), Gold Gulch Dam No. 2 and Reservoir, TSF4 via the No. 4 Tailings Pipeline, or the Raffinate Pond. All seepage/stormwater retention facilities related to APP-regulated facilities shall at a minimum be so designed, constructed, and operated to contain the direct precipitation plus watershed runoff from the 100-year, 24-hour storm event plus the normal operating volumes.
Seepage/Stormwater Retention Facilities With the exception of Rosa's Pond Diversion Ditch, Lower Runoff Catchment Pond No. 1/Road Pond, Lower Runoff Catchment Pond No. 2/Charlie Pond, Long Pond and Short Pond, all seepage/stormwater retention facilities for APP-regulated facilities shall be, at a minimum, designed, constructed, and operated to contain the contact/impacted runoff from the 100-year, 24-hour storm event plus the normal operating volumes or to manage the maximum amount of runoff produced during 5 consecutive days of a MSE whichever is larger, including 2 feet of freeboard. Each facility has been designed and shall be maintained to manage runoff from the 100-year, 24-hour storm event plus the normal operating volumes, in addition to freeboard requirements. Pumping equipment and backup power sources shall be maintained where necessary for use in controlling stormwater runoff and recycle it to the process water control system. These facilities shall be operated and inspected according to the requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION.
No. 1 Seepage Toe Drain and Caisson: The No. 1 Seepage Toe Drain was constructed along the southwestern base of the TSF1 dam and consists of coarse rock emplaced in a 4-foot-deep, cobble-lined ditch. Commingled tailings seepage and stormwater runoff from TSF1 shall be collected and conveyed to the No. 1 Seepage Caisson. The bottom of the ditch is lined with fine tailings with an estimated permeability of 1 x 10-3 cm/sec or less to limit infiltration. The slope of the drain shall be maintained to prevent water from ponding in the bottom of the ditch. The Caisson consists of a rock-filled basin with a 4-foot-diameter, perforated, concrete caisson emplaced vertically approximately 30 feet into the ground. Water collected in the Caisson shall be pumped to the Upper Catchment Sand Trap (APP-exempt); overflow from the Caisson shall be collected in the No. 1 Upper Basin. The seepage shall be collected and returned to the mill process water system, which is equipped with redundant power. Inspections of the structure, pumps, and emergency power shall occur on a routine basis and in accordance with the requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION.
No. 1 Upper Basin: The No. 1 Upper Basin is an excavated basin in native soil at the southwest corner of TSF1. This basin shall receive and retain overflow from the No. 1 Toe Drain and No. 1 Seepage Caisson, and stormwater runoff from the southern face of the TSF1 dam via the Upper Catchment Toe Drain. The embankment and pond bottom were constructed of select compacted materials; accumulated fine sediment covers the bottom and embankment sides. The overflow/spillway shall consist of a 36-inch inner diameter steel pipe and a 10.5-inch inner diameter HDPE pipe serving as conveyance piping. Overflows shall be routed to the No. 1 Lower Basin or No. 1 Seepage Caisson or Upper Catchment Sand Tank (APP-exempt). The facility and related

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equipment shall be regularly inspected and maintained in accordance with requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION. The capacity of the basin together with the overflow facilities shall provide storage in excess of the 100-year, 24-hour storm event. Water from this basin is recycled and reused by the mine mill water process system, and water reclamation was considered as a component of existing facility BADCT for this mine.
No. 1 Lower Basin The No. 1 Lower Basin is a basin excavated in native soil and located below the No. 1 Upper Basin and separated from it by a roadway berm. The embankment and pond bottom were constructed of select compacted materials; accumulated fine sediment covers the bottom and embankment sides. The basin shall be maintained for use during unusual precipitation events. It receives seepage and stormwater runoff from the No. 1 Upper Basin. Water collected in the basin is pumped to the No. 1 Seepage Caisson or the Upper Catchment Sand Tank (APP-exempt). Permitted overflow discharges may report to the AZPDES Outfall 002 and Pinto Creek and these discharges are monitored in accordance with AZPDES Permit AZ0020401. The facility and related equipment are regularly inspected and maintained.
Upper Catchment Upper Pond The Upper Catchment Diversion Ditch (APP-exempt) starts at a point below the Mine Office Building along the east side of Forest Service Road 287 and discharges into Upper Catchment Upper Pond. The Upper Catchment Diversion Ditch is part of the Upper Catchment Collection and Pumping System and consists of a corrugated metal pipe culvert system that collects stormwater associated with the 100-year, 24-hour storm event and returns it to the Upper Catchment Upper Pond or Upper Catchment Lower Pond for return to the mill process water system for reuse as a part of BADCT for the Upper Catchment Upper Pond. The Upper Catchment Upper Pond is located east of the southern-most point of TSF1. This pond receives runoff flows from the Upper Catchment Diversion Ditch, seepage flows from the southern face of the TSF1 dam, flows from the Upper Catchment Sand and Holding Tanks (exempt from APP) during storm events that exceed tank capacity, and runoff from the Concentrator Area. The pond was excavated in native soil; the embankment was constructed from selected excavated materials, which were then compacted. The pond shall have an approximate storage capacity of 0.18 acre-feet and serve as a sedimentation basin for the Upper Catchment Lower Pond (below), from which it is separated by an earthen berm with a 24-inch corrugated metal pipe that acts as an overflow outlet.
Upper Catchment Lower Pond The Upper Catchment Lower Pond is located east of the southernmost point of TSF1 and is separated from the Upper Catchment Upper Pond by an earthen berm with a 24-inch corrugated metal pipe that acts as outlet for drainage to the Upper Catchment Toe Drain. The drainage is pumped through pipes into the Upper Catchment Holding Tank (APP-exempt) and then to the Upper Catchment Upper Pond. This impoundment was excavated in native soils and the bottom and sides of the embankment were constructed of compacted borrow material and lined with accumulated fine sediment with an estimated conductivity of 1 x 10-3 cm/sec or less. Water from the pond is recycled by pump back to the APP-exempt Upper Catchment Holding Tank and then returned to the mill process water system or pumped to Cottonwood Reservoir or Upper Tule Pond for storage. The pond shall have a storage capacity of approximately 14.5 acre-feet. Seepage and flow reaching the elevation of the metal outlet pipe shall be captured in a French drain system (the Upper Catchment Toe Drain). The facility is equipped with diesel engine-driven pumps for emergency use and the facility and pumps shall be regularly inspected and maintained.
Upper Catchment Toe Drain The Upper Catchment Toe Drain is located at the base of the Upper Catchment Lower Pond and extends in a westerly direction. This French drain system consists of a 3,000-foot-long, 6-inch-diameter, buried, slotted HDPE pipe at the base of the Upper Catchment Lower Pond berm. The toe drain captures seepage and flows through the metal pipe from the Upper Catchment Lower Pond. This drain discharges to the No. 1 Upper Basin, where the water is reclaimed for use in the Concentrator via the mill process water system.

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Upper Tule Pond Upper Tule Pond is located southwest of the Concentrator, west of and adjacent to the Forest Service Road 287. The pond was excavated into native soil; the bottom was compacted; and fine sediments accumulated on the bottom to provide a low-permeability bottom, with an estimated permeability of 1 x 10-3 cm/sec or less. Upper Tule Pond collects stormwater runoff from the Concentrator Area and South Truck Shop area (roof and concrete aprons) via the Southside Ditch and Mine Office area, pumped discharge from the Upper Catchment Lower Pond, seepage and stormwater runoff from the Cottonwood Tailings Impoundment, and pumped seepage from the Cottonwood Seepage Caisson System. Accumulated water in this pond is pumped by a floating barge-mounted pump to the mill process water system. Overflows from this Pond are directed to the Lower Tule Pond. The Upper Tule Pond shall have a storage capacity of 17.8 acre-feet. The storage and pumping capacity shall be sufficient to manage the 100-year, 24-hour storm event.
Lower Tule Pond Lower Tule Pond is located southwest of the Concentrator and northwest and adjacent to Upper Tule Pond. It was excavated into the native soil below and is separated from the Upper Tule Pond by an embankment constructed of compacted fill. The sides and bottom are lined with accumulated fine particulates. The Lower Tule Pond shall have a storage capacity of approximately 28.9 acre-feet and receives overflow from Upper Tule Pond. Inflows from the Upper Tule Pond consist of stormwater runoff, seepage from tailings impoundment, and treated wastewater from the wastewater treatment plant. Discharge from Lower Tule Pond is to Tule Holding Tank (APP-exempt). Lower Tule Pond is part of a closed-loop system and inflows to this Pond are returned to the mill process water system for water reclamation.
Lower Tule Caisson The Lower Tule Caisson is located downstream of the Lower Tule Pond. The caisson is a vertically-emplaced pipe that intercepts and collects seepage from the Lower Tule Pond for pump back to the mill process water system for water reclamation. Seepage is pumped back to Lower Tule Pond by a submersible, level-actuated pump, with sufficient capacity to return all flow to Lower Tule Pond, where it is part of a closed-circuit system that returns all flows to the mill process water system.
North Pond North Pond is located northwest of the Concentrator and is adjacent to the final tailings thickeners. North Pond shall have a 3-acre-feet storage capacity and collect stormwater runoff from the Concentrator Area and excess tailings that may flow out of the final tailing thickener feed distribution box. This pond was excavated in native soil with accumulated fine tailings providing a low permeability bottom. A compacted berm was constructed at the west side of the pond to separate it from Peeples Pond. Accumulated tailings shall periodically be pumped back to the thickeners and water pumped to the mill process water system or discharged to Peeples Pond. North Pond is a closed loop system. Pumps with a maximum capacity of 600 gpm shall be used and are installed at the North Pond. The combined pumping capacity of pumps (in gpm) shall exceed the normal expected inflow to this pond including flows associated with 100-year, 24-hour storm event. Portable pumps shall be available for use in emergency situations as a backup.
Peeples Pond Peeples Pond is located west of North Pond and northwest of the final tailings thickeners. This pond collects process water and stormwater runoff from the Concentrator Area, and also receives overflow from North Pond. This water is captured and returned to the mill circuit water system upstream of Peeples Pond. Peeples Pond was excavated into native soil below the mine access road. The pond liner system shall comprise the following from bottom to top: engineered fill or compacted native material, soil cushion layer (where required by engineer), single-sided geocomposite blanket drain, and 80 mil HDPE liner. The pond shall have sides slopes of 2H:1V. The slopes directly above the lined facility shall be protected with rock armor consisting of layers of gravel and riprap, and the flows from the North Pond overflow culvert shall include a riprap apron. The modified pond shall be equipped with: underdrain, sump, riser and cleanouts. The modified pond, as designed, shall have a lined storage capacity of 25.81 acre-feet within a total 52.47 acre-feet capacity for the pond, which is more than adequate to passively handle the volume from a 100-year, 24-hour storm event. An underdrain sump and pump riser shall be installed at the

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northern end of the pond to capture any solution and return it to the pond. The pond shall be equipped with three barge-mounted discharge pumps to return the water to the mill process water system. The capacity of the pumps shall exceed expected inflow rates to ensure that pump back capacity can stay ahead of normal inflow and flow associated with the 100-year, 24-hour storm event. A concrete sediment trap and access ramp shall be constructed near the southern end of the pond.
Southside Ditch The Southside Ditch is located south of the South Truck Shop Facility (APP-exempt) and was excavated into native soil, with culverts used to pass flow under the roadway. The Southside Ditch collects stormwater runoff and process spillage from the Concentrator Area and South Truck Shop and directs it via a collection ditch located west of the Mine Office buildings into an existing pipe culvert that carries runoff south to Upper Tule Pond where water is pumped to the APP-exempt Tule Holding Tank and back to the mill process water system. The bottom of the Southside Ditch is partially formed from culvert, which reduces the potential for infiltration. The ditch shall have a carrying capacity sufficient to contain a maximum flow of approximately 4,000 gpm and shall be sloped to prevent ponding in the bottom of the ditch. Accumulated fine sediment in the ditch shall reduce the permeability in the base and side walls of the ditch to approximately 1 x 10-3 cm/sec or less to limits infiltration.
East Catchment & East Catchment Caisson The East Catchment and East Catchment Caisson are located on the east side of TSF3 and collect stormwater runoff and seepage from it. East Catchment was excavated into the natural soil and the bottom and embankments were constructed of imported compacted fill, with accumulated fine particulates providing a low-permeability bottom to the pond of 1 x 10-3 cm/sec or less. The East Catchment Caisson shall allow fluid to be collected for pump back for use in water reclamation. The Caisson is installed within the East Catchment. The facility is a closed-circuit, with all inflows being pumped to the mill process water system and a downstream seepage collection system to capture any seepage. The storage capacity of the facility shall maintain a sufficient volume (5.52 acre feet) to contain the 100-year, 24-hour storm event and normal operating discharges.
Slack/Conklin Pond Slack/Conklin Pond is located downstream and due north of the center of TSF3 North Embankment Buttress and is between East Catchment and Canyon Dam. The pond was constructed by excavating down in native soil and Gila Conglomerate. The embankment shall be maintained as an engineered, permitted, jurisdictional dam fitted with a concrete spillway. Slack/Conklin Pond collects stormwater runoff and seepage from a small drainage area below TSF3, overflow and seepage from West Catchment, pumped discharge from No. 3 Caisson, and is an alternate collection point for water pumped from Canyon Dam. Commingled seepage and stormwater runoff discharge to Tank 16 and overflow is captured by East catchment. Seepage from Slack/Conklin Pond shall be collected in No. 3 Seepage Caisson. This pond shall have a storage capacity of 38.68 acre-feet. The capacity shall be sufficient to contain the 100-year, 24-hour storm event, which is calculated at 34.15 acre-feet and with pump back capacity to handle cumulative inflows.
No. 3 Seepage Caisson The No. 3 Seepage Caisson is located west of and downstream of Slack/Conklin Pond. This vertically emplaced pipe shall collect seepage from the French drain system located below Slack/Conklin Pond. The seepage shall be pumped back to Slack/Conklin Pond by a submersible, level-actuated pump, which has sufficient capacity to return all flow to Slack/Conklin Pond. The pipe shall have a storage capacity of approximately 2,000 gallons. Minor seepage that might bypass the caisson shall be captured by Canyon Dam.
West Catchment West Catchment is located downstream of the westernmost portion of the consolidated TSF3 dam and buttress. This retention pond shall capture stormwater runoff from the TSF3 dam face, adjoining North Embankment Buttress, and from the header road located at the top of the dam. West Catchment was excavated into the natural soil, dacite, and Gila Conglomerate, and the embankment was constructed of imported compacted fill. The bottom of the facility is formed from compacted fill and accumulated fine sediment with an estimated low permeability of 1 x 10-3 cm/sec. A barge pump shall be used to pump

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discharge to Slack/Conklin Pond or Tank 16. The basin shall have a storage capacity of 1.5 acre-feet, augmented by gravity overflow to Slack/Conklin Pond, which can contain the 100-year, 24-hour storm event. The permittee shall perform frequent inspections, periodically remove accumulated particulates from the bottom of the pond as needed to maintain storage capacity.
Canyon Dam Canyon Dam is located approximately 1,000 feet west of and downstream of Slack/Conklin Pond. This dam is constructed into native soil with an embankment constructed of imported compacted fill. The bottom of the facility was also constructed from compacted fill and is lined with accumulated sediment. The dam shall be equipped with a concrete spillway that acts as an AZPDES outfall. The pond behind the dam collects stormwater runoff and seepage for the drainage area located west of the TSF3 and below Slack/Conklin Pond. A diversion ditch shall be located upstream and to the southwest of Canyon Dam to divert undisturbed stormwater runoff. This pond shall have an 8.56 acre-feet storage capacity, sufficient to contain the100-year, 24-hour storm event. The pumping capacity shall be sufficient to prevent overflow discharge during a 100-year, 24-hour storm event. Commingled stormwater runoff and seepage discharges shall be pumped to Slack/Conklin Pond or Tank 16; and overflow shall be directed to AZPDES Outfall 003.
Road Crossing Pond The Road Crossing Pond receives stormwater runoff from the Forest Service Road 287 and the North Barn parking lot and it can receive water from Cottonwood Reservoir and stormwater from TSF1. The pond has side slopes of 3H:1V (horizontal to vertical), and lined with 80-mil HDPE, underlain by single-sided geocomposite blanket drain, over a prepared subgrade consisting of soil cushion layer and engineered fill or compacted native material. The pond shall maintain a storage capacity of approximately 98 acre-feet (31,933,440 gallons) including the 100-year, 24-hour total precipitation inflow volume of 27.9 acre-feet (9,091,255 gallons). The total precipitation inflow volume is based on the direct precipitation on the pond and the upgradient stormwater runoff. The Road Crossing Pond is located 100 percent within the PCCZ.
Able Pond Able Pond is located northwest of Gold Gulch Dam No. 2 and Reservoir and just west of TSF4 access road. It is a constructed impoundment located adjacent to the No. 4 Tailings Pipeline that is used to convey tailings from the Concentrator to TSF4. Able Pond was excavated into native soils. A berm was constructed from excavated spoils and native material. The bottom and berm were compacted so as to provide a low-permeability surface. The estimated permeability of this surface is 1 x 10-3 cm/sec or less. Able Pond shall collect and contain tailings in the event of an emergency that requires draining or of failure of the No. 4 Tailings Pipeline. Inflow to Able Pond shall only occur during emergency situations and discharge would include tailings decant water and stormwater runoff. Able Pond shall have a design storage capacity of 6.49 acre-feet. The capacity of Able Pond (6.49 acre-feet) shall be sufficient to contain the entire volume of the No. 4 Tailings Pipeline located upgradient of the pond. Decant water from this pond is pumped to Tank 16 for return to the mill process water system and solids are excavated for disposal as needed to maintain storage capacity.
Gold Gulch Final Catchment Gold Gulch Final Catchment is located downgradient of Gold Gulch Dam No. 2 and Reservoir, and adjacent to the No. 4 Tailings Pipeline, which conveys tailings from the Concentrator to TSF4. The Gold Gulch Final Catchment was excavated into native soils. The berm was constructed from excavated soils and native material. The bottom and berm were compacted to provide a low-permeability surface and contained fine-grained solids reduce the permeability of the bottom. The estimated permeability of this surface is 1 x 10-3 cm/sec or less. Gold Gulch Final Catchment collects and contains tailings in the event of a failure of the No. 4 Tailings Pipeline or as a result of an emergency requiring draining the pipeline. The Gold Gulch Final Catchment has a storage capacity of 2.8 acre-feet. The capacity of 2.8 acre-feet shall be sufficient to contain the entire volume of the pipeline located upgradient of the pond for complete containment in the event of pipeline failure. Decant water from this catchment shall be pumped to Tank 16 for return to the mill process water system and solids shall be excavated for disposal as needed to maintain storage capacity.

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Baker Pond Baker Pond is located northwest of Able Pond and is a constructed impoundment located near the No. 4 Tailings Pipeline. Baker Pond is used for emergency tailings storage if tailings are released from the tailings pipeline during the few minutes it would take for detection of the failure. In the event of tailings release, the system is designed to collect tailings from the area between TSF4 and Baker Pond. Baker Pond was excavated into native soils and a berm was constructed from excavated soils and native material. The bottom and berm were compacted so as to provide a low-permeability layer to limit infiltration. The estimated permeability of materials in the base and berm is 1 x 10-3 cm/sec or less. The storage capacity of Baker Pond is 20.01 acre-feet and shall be sufficient to contain the entire volume of the No. 4 Tailings Pipeline located upgradient of the pond and extending north to TSF4, so complete containment will occur. Water in Baker Pond shall be disposed through evaporation. Sediment shall be removed periodically as needed to maintain the pond's storage and collection capacity.
Rosa's Pond Rosa's Pond is located at the downstream toe of TSF4 dam near the center of the dam. The system consists of one evaporation pond excavated into the native ground, the bottom of which is highly impermeable. The estimated permeability of the pond base is 1 x 10-3 cm/sec or less. Rosa's Pond collects seepage and stormwater runoff from the face of TSF4 dam and the area below Yasin Catchment, which is regulated by this permit as part of TSF4. Rosa's Pond shall be designed and maintained as a containment and evaporation area and is not equipped with a pumping system. The capacity of 2.85 acre-feet shall be sufficient to contain the 100-year, 24-hour storm event.
Rosa's Pond Diversion Ditch Rosa's Pond Diversion Ditch was constructed on the north side of the TSF4 embankment between Rosa's Pond and the embankment itself. It consists of a rock armored channel to intercept and convey a portion of the stormwater from the reclaimed embankment around Rosa's Pond to Short Pond. The ditch was constructed in conjunction with the partial closure of the TSF4 embankment in 2009. The base of the ditch is sloped to the southwest. The ditch shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Road Pond/Lower Runoff Catchment Pond No. 1 Road Pond/Lower Runoff Catchment Pond No. 1 is located directly north of the TSF4 embankment and at the base of the original starter dam. This pond was excavated in native soil and the sides and bottom are lined with accumulated fine particulates. The pond intercepts seepage and stormwater from the TSF4 embankment and allows it to evaporate. The pond shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Charlie Pond/Lower Runoff Catchment Pond No. 2 Charlie Pond in located to the west of and downstream of Road Pond. The pond is created by an earthen berm across a natural drainage. Access to the pond and berm are provided by a dirt road along the north side of the drainage. The pond provides redundancy to seepage and stormwater collected in Road Pond. A culvert is placed approximately 5-feet below the top of the berm. The pond shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Long Pond Long Pond is located north of the toe of the TSF4 embankment and created by a small earthen berm on its west side and the sides and bottom are lined with accumulated fine particulates. The pond is equipped with an overflow culvert. The pond shall receive stormwater from the reclaimed embankment and allow it to evaporate. The pond shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Short Pond Short Pond is located north of the toe of the TSF4 embankment and excavated in native soil and the sides and bottom are lined with accumulated fine particulates. The pond shall receive stormwater from the reclaimed embankment and allow it to

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evaporate. The pond is equipped with culverts approximately 5-ft. below a riprap spillway. The pond shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Yasin Catchment The Yasin Catchment was excavated into the northwest face of the TSF4 dam and collects stormwater runoff from the face of the dam. It also originally served to catch spills from the TSF4 Pumping Station, spilled tailings and gland seal pump drips for pumpage to TSF4 Dam. The bottom of the catchment is lined with fine tailings with an approximate permeability of 1 X 10-3 cm/sec. An electric barge-mounted pump is used to transfer collected water which had separated from settled tailings, back to the TSF4 impoundment. The catchment has a ramp on the west side to facilitate periodic cleanout. Following replacement of the tailings pumping station and installation of a replacement tailings pipeline in 2016, the catchment was repurposed to serve as a lift station to transfer seepage and stormwater from ponds and catchments located near the toe of the TSF4 embankment, to the TSF4 beach where it would drain to the reclaim pond and be returned to the mill. The catchment shall be inspected monthly and after a significant storm or natural disaster, regardless of operating status.
Cottonwood Reservoir Cottonwood Reservoir is located southeast of the Concentrator on the northeast side of the Cottonwood Tailings Impoundment. It has a maximum height of 32 feet and is approximately 700 feet in length with an upstream face covered with rip rap and a downstream drainage blanket. This reservoir was constructed of tailings from downstream of the reservoir, with a drainage blanket of sand and gravel placed on the downstream portion of the dam to control seepage and reduce piping of the existing tailings. The upstream filter consists of silty sand and gravel material. The upstream face of the dam was covered with a riprap layer of cobbles and boulders ranging in size from 3 to 18 inches. Cottonwood Reservoir is the primary process water storage facility for PVM and receives stormwater runoff, seepage, reclaimed water and process make-up water. A floating barge-mounted pump shall be used to deliver recycled water from the reservoir to the mill head tank. The reservoir storage capacity shall be 453.63 acre-feet based on a design discharge rate of up to 5,000 gpm. Accumulated fine-grained tailings have rendered the bottom of the reservoir relatively impermeable and infiltration that passes through the bottom of the reservoir shall be collected as seepage in the Cottonwood Seepage Caisson System. In extreme storm events, surface water may flow over the reservoir spillway onto the surface of the Cottonwood Tailings Impoundment to be captured in the Cottonwood Settling Basin. The Cottonwood Reservoir is a closed system.
Cottonwood Seepage Caisson System The Cottonwood Seepage Caisson System is located at the western edge of Cottonwood Tailings Impoundment and consists of a collection tank, caisson, and transfer pump. The system collects seepage and stormwater runoff from within Cottonwood Tailings Impoundment and from the western face of the impoundment. The caisson is 22 feet deep, and the water level is maintained at 19 feet below surface. The collection tank is 4 feet deep and receives seepage water from a 4-inch diameter pipeline that connects with the decant tower located within the impoundment. Overflow from the collection tank flows to the caisson. Pumps within the caisson transfer water to Tule Holding Tank, where it is pumped to the mill process water system. The Cottonwood Seepage Caisson System is fully contained collection point that collects water to be reclaimed for use in the Concentrator. Pumps shall be of sufficient capacity to prevent the possibility of inadvertent release. In the event of overflow, the facility is permitted for release of water through AZPDES Outfall 004.
Tailings Impoundments Tailings storage facilities (TSFs) were constructed using the upstream construction method. Tailings shall be deposited in two active engineered tailings impoundments (TSF3 and TSF4) using cycloning and spigotting to separate the coarse portion of the tailings from the slimes. The coarse portion shall be used for dam construction. The slimes were used for lining the tailings decant ponds during the construction of the decant ponds and were used as low permeability liner material to decrease infiltration and seepage. This use of slimes is not an on-going operational method. Decant pond size shall be minimized by constant reclaiming and recycling of decant water to the process water control system. Beach widths shall be optimized to enhance dam stability.

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Dam stability shall be monitored using piezometers. These facilities shall be operated and inspected according to the requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION.
Tailings Storage Facility No. 1 (TSF1) (in post closure): TSF1 has been decommissioned and has not received tailings material since 1989. The closure work for this facility consisted of: re-grading the sloped areas, rock armoring on the faces of TSF1 and Southside Dump 14, placement of evapotranspiration cover on the top and faces, construction of stormwater diversion channels, and implementing re-vegetation. The facility remains in post-closure maintenance.
Tailings Storage Facility No. 2 (TSF2): TSF2 is located north of TSF1 and includes accumulated tailings and a former decant pond. Deposition of tailings in TSF2 was discontinued in 1989. Any seepage from TSF2 flows into TSF3 in the Gold Gulch drainage area. A tailings booster pump station and a single-lined pond (Fuller Pond) are located on top of the TSF2. The pond, lined with 80-mil HDPE, is located on a wide bench of TSF2 about 400 feet from the crest of the tailings embankment slope separating TSF2 from TSF3. The pond was constructed from the original grade of about 3,850 feet to a crest elevation of 3,856 feet. The pond is irregular in plan dimension, having an average width and breadth of about 180 feet by 240 feet, and a depth of 16 feet. The interior slopes of the pond are 3H:1V. A reinforced concrete ramp is provided for cleaning up sediments. The pond is used for temporary tailings storage that have been collected within the contained area of the pump station and for draindown of the TSF4 tailings distribution line.
Tailings Storage Facility No. 3 (TSF3) TSF3 and the adjoining TSF3 North Embankment Buttress are located north-northwest of TSF2 and is permitted to accept tailings from the flotation process at the concentrator. It consists of a tailings impoundment, a series of pumps, caissons, collection drains, ditches, ponds, and tanks designed to collect and recycle seepage and stormwater runoff from the face of the consolidated TSF3 Dam and TSF3 North Embankment Buttress. The North Embankment Buttress has been added to improve the stability of TSF3 per design documents submitted as part of the permit application. All stormwater runoff and seepage collected (in the nearby East Catchment and Caisson, Slack/Conklin Pond, West Catchment, No. 3 Seepage Caisson, and Canyon Dam) shall be returned to the mill process water system, except for overflow that is permitted through AZPDES Outfall 003. The facility shall be operated as a closed-circuit system that meets BADCT requirements. A minimum 3 feet freeboard is required, measured from the surface of the supernatant decant pool to the lowest point on the TSF3 embankment. The facility components shall be regularly inspected and periodically maintained to ensure proper operation in accordance with the requirements of this permit. Parts of the east side of TSF3 will be covered by the West Dump and the closure of that part will done under the closure of the West Dump.
Tailings Storage Facility No. 4 (TSF4) TSF4 is located approximately 4 miles north of the Concentrator in Eastwater Canyon and is permitted to accept tailings from the flotation process at the concentrator. The starter dam was originally constructed by the upstream method. The design consisted of an excavated dacite rock-fill embankment with a low-permeability cap on the upstream face. A 30-foot-thick layer of drain material was placed between the rock fill and soil cover of Gila Conglomerate with a 10-foot-thick layer of river run gravel placed on the Gila Conglomerate to act as a toe drain and shall be maintained to serve in this function. Tailings slimes were used to line the bottom of the impoundment to create a low-permeability base. Decant water is recycled to the mill process water system and seepage and stormwater runoff are directed to downstream intercept ponds and basins (Yasin Catchment, Rosa's Pond, and Lower Runoff Catchment Pond No. 1 [also called Road Pond] and Lower Runoff Catchment Pond No. 2 [also called Charlie Pond]), which have been upgraded to increase capture of seepage from the dam. In addition, operational engineering controls shall be used to reduce the size of the decant pond, therefore decreasing the seepage emanating from the pond. The dam face (below elevation 3,790 feet) has been reclaimed with a minimum 2-foot-thick soil cover, which is subsequently protected with 6 to 13 inches of rock armor, depending upon slope angle and locations. While re-vegetation activities are applied to reclaimed areas to enhance aesthetics and water uptake, the rock armor prevents erosion. Any discharging dam faces that are not reclaimed will be stabilized with tackifiers, re-vegetation, or equivalent techniques to prevent erosion. The Yasin Catchment was excavated into the northwest face of the TSF4 dam and collects stormwater runoff

Table 10: PERMITTED FACILITIES AND BADCT
from the face of the dam, as well as spills from the TSF4 Pumping Station, spilled tailings and gland seal pump drips which shall discharge to the concrete lined gland water sump (APP-exempt) and then through pipes to Yasin Catchment for pumpage to TSF4 Dam. Yasin Catchment is located on TSF4. The collected water is then pumped back to the mill process water system. Charlie and Road Ponds and the Rosa's Diversion Ditch are all part of BADCT for TSF4 and collect and divert contact stormwater from the face of the tailings to downstream structures. These ponds evaporate stormwater received from TSF4. Stormwater run-on at TSF4 is collected and reused in mine processes. As long as stormwater run-on is allowed at this facility, pumps shall be maintained to be used in support of BADCT. The minimum beach distance of 1,500 feet shall be maintained at this facility during normal operating conditions, and a minimum of 400 feet following a 100-year, 24-hour storm event. A minimum of 8 piezometers shall be installed and the water levels shall be measured to ensure the phreatic surface is maintained within safe operating limits per Section 4.2, Table 14: PIEZOMETER MONITORING. In order to remain on patented land until tailings placement on public land was authorized by the US Forest Service, TSF4 required addition of two boundary dams located on the east side of the facility. The dams were constructed in a staged manner. In November 2021 the US Forest Service authorized tailings placement to extend across the property boundary, subsume the boundary dams and continue to a maximum elevation of 4,250 feet asml.
Waste Rock Dumps The waste rock dumps and associated runoff impoundments shall be operated and inspected according to Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION. Waste rock dumps at the facility fall into three categories: 1) those developed pre-APP and that were in use at time of original APP, 2) those that were part of the original or subsequent APP applications and have yet to be developed, but BADCT was approved at the time the original or subsequent APP was issued, and 3) new facilities permitted and in use since the time of the original application. The permittee may test materials for inertness to determine whether the materials are exempt.
Northside Dump 9.1 The Northside Dumps are located north of Gold Gulch and are used to contain waste rock from the Open Pit. They include Northside Dump 9.1, 9.11, and 9.12, which are located west of the Low-grade Ore Leaching Piles, and Northside Dump 9.3, which is located south of Gold Gulch and west of the Open Pit. Inflows consist of stormwater and discharges of stormwater runoff. Seepage from these dumps is not known to occur. The potential for acid generation and attendant leaching of heavy metal constituents by percolating waters through the waste rock dumps to the underlying bedrock system is low, based on the results of the geochemical sampling and analyses which indicate that materials in the Northside dumps are non-acid forming (Hargis, 1995) (Schafer & Associates, 1995). Stormwater runoff from the 9.11, 9.12, and 9.3 Dumps is contained by runoff diversion or collection facilities. Northside Dump 9.1 primarily overlies dacite and consists of approximately 680,000 tons of rock in equal mixtures of granodiorite, diabase, quartz monzonite, and altered limestone, with small quantities of Gila Conglomerate, Whitetail Conglomerate, granite porphyry, schist, and quartzite. Runoff from the 9.1 Dump shall follow natural drainages and terminate prior to reaching Pinto Creek. Stormwater intercept and diversion ditches shall be regularly inspected and cleaned.
Northside Dump 9.11 Northside Dump 9.11 consists of approximately 13.5 million tons of rock consisting mainly of quartz monzonite and diabase, with smaller amounts of granodiorite, granite porphyry, Whitetail Conglomerate, Gila Conglomerate, schist, and quartzite. It overlies Whitetail Conglomerate and dacite.
Northside Dump 9.12 Northside Dump 9.12 consists of 560,000 tons of rock consisting mainly of quartz monzonite and Whitetail Conglomerate, with smaller quantities of diabase, Gila Conglomerate, quartzite, and altered limestone. It overlies Whitetail Conglomerate and dacite.

Table 10: PERMITTED FACILITIES AND BADCT
Northside Dump 9.3 Northside Dump 9.3 consists of approximately 9 million tons of waste rock consisting mostly of diabase and Whitetail Conglomerate, with additional granodiorite, schist, quartzite, basalt, altered limestone, and some tailings. This waste rock was placed above Gila Conglomerate. This facility is located 100 percent within the PCCZ.
Southside Dump 13 The inactive Southside Dumps are located on the south side of the mine and are used to contain waste rock from the Open Pit. They include Southside Dump 13 and Southside Dump 14, which are located northwest of the Concentrator and southwest of the Open Pit and southeast of TSF1, and 19 Dump and 19.1 Dump, which are located south of Schist Hill, south of the Open Pit. The overall acid-forming potential of the Southside Dumps is considered to be moderate to low because of the composition of the rock types deposited there. Drainage from the Southside Dumps shall be controlled and contained. Diversion ditches shall limit the amount of stormwater run-on to the dumps and direct runoff to collection ponds or other facilities for reclamation. No stormwater runoff from the waste rock dumps is discharged. The potential for acid generation and attendant leaching of heavy metal constituents by percolating waters within the waste rock dumps to the underlying bedrock system is low, based on the results of the geochemical sampling and analyses. This facility is located 100 percent within the PCCZ. Southside Dump 13 (6.9 acres) consists of approximately 1 million tons of rock composed primarily of diabase and quartz monzonite, with smaller amounts of granodiorite, Gila Conglomerate, Whitetail Conglomerate, and basalt. It overlies Gila Conglomerate and basalt.
Southside Dump 14 (in post closure) The Southside Dump 14 has been decommissioned and was closed as part of TSF1 closure. The area where the Southside Dump 14 existed overlaid TSF1 and the majority of the material was used in constructing the cover layer for TSF1. The closure work for this facility consisted of: re-grading the sloped areas, rock armoring on the faces of TSF1 and Southside Dump 14, placement of evapotranspiration cover on the top and faces, construction of stormwater diversion channels, and implementing re-vegetation. The facility remains in post-closure maintenance.
19 Dump The 19 Dump has a disposal capacity of 101.3 acres and consists of approximately 27 million tons of rock composed mostly of schist. The dump overlies granite. Stormwater runoff from 19 Dump shall flow to Cottonwood Reservoir.
19.1 Dump The 19.1 Dump has a disposal capacity of 1.3 acres and is a small dump consisting of less than one million tons of waste rock comprised of schist. It overlies schist. Stormwater runoff from 19.1 Dump shall flow into the open pit. This facility is located 100 percent within the PCCZ.
19 Extension Dump (not yet constructed) The 19 Extension Dump shall be located south of the existing 19 Dump in Cottonwood Canyon and shall be used to contain waste rock from the Open Pit. It shall consist of approximately 19 million tons of waste rock and will cover 156 acres. Stormwater runoff from the Cottonwood Canyon drainage area will be discharged to the Cottonwood Reservoir, where it shall be fully captured and returned to the mill process water system. No direct releases to the aquifer will occur. The dump shall be designed, constructed, and operated in accordance with the requirements of the approved BADCT design. It will be constructed exclusively from non-acid forming schist and will be constructed partially on the existing 19 Dump and will bridge the upper reaches of Cottonwood Canyon.
Castle Dome Marginal Dump (CDMD) The CDMD will be located adjacent to the south edge of the PVM Open Pit and contain approximately 10,000,000 tons of marginal-grade waste rock on 45 acres, of which 15 acres will be on undisturbed ground, 15 acres on disturbed ground (historic mill site), and approximately 15 acres will be outside the area of the mill site. The Castle Dome mill site is not part of BADCT for a discharging facility. The CDMD was analyzed for both static and dynamic loading conditions and meets the BADCT (Appendix E) factor of safety (FOS) design criteria. The build-out height of the CDMD shall be no greater than 360 feet at a

Table 10: PERMITTED FACILITIES AND BADCT
crest elevation of 4,370 feet amsl. Geochemical modeling along with static tests indicated that there is potential for the CDMD to generate acidic rock drainage, which will discharge to the Open Pit (hydrologic sink).
Main Dump The Main Dump, with a total footprint of approximately 421 acres, will be located on a portion of the retired Low-grade Ore Leaching Piles (LGLP) north of the Open Pit. The total volume of material to be placed on the Main Dump will be approximately 419,900,000 tons. While a majority of the Main Dump will be located on the retired leach pile, about 27.3 acres of the eastern portion will be located on undisturbed ground. The eastern portion of the dump that will be located on undisturbed land will be underlain by limestone and dacite which have hydraulic conductivity values ranging from 2×10^{-3} to 2×10^{-6} cm/sec. The Main Dump was analyzed for both static and dynamic loading conditions and meet the BADCT factor of safety (FOS) design criteria for leach dump material. There is no change to the stability assessment for the waste rock in Main Dump, as the design heights and slopes are designed to the same stability criteria as for the prior GGDs and leach dump material. Slope angles for the surface of the Main Dump vary slightly over the facility but range from 29 to 30 degrees as was previously designed for the GGDs and the leach material. The maximum crest elevation of the Main Dump shall be no more than approximately 5,075 feet.
North Barn Marginal Dump The NBMD will be located along the west-southwest side of the PVM Open Pit and contain approximately 11,000,000 tons of marginal-grade waste rock on approximately 36 acres of disturbed ground and existing waste rock dump material. The NBMD was analyzed for both static and dynamic loading conditions and meet the BADCT (Appendix E) factor of safety (FOS) design criteria. The build-out height of the NBMD shall be no greater than 257 feet at a crest elevation of 4,175 feet amsl. Geochemical modeling along with static tests indicated that there is a potential for acid generation and attendant leaching of heavy metal constituents by percolating waters within the rock pile, but the volume of impacted seepage is expected to be negligible. The coarse size of run-of-mine material will aid evaporation and limit the residence time that percolating waters are in contact with the rock piles, and thereby reduce the potential for acid generation. The NBMD is located 100 percent within the PCCZ, so discharge from the facility will report to the Open Pit. The majority of the runoff from the top and sides of the NBMD will report to the Road Crossing Pond. Stormwater run-on will be diverted around the facility in diversion channels, however, the geologic formations located below the NBMD are expected to neutralize the potential discharge from the marginal material.
West Dump (not yet constructed) The West Dump will be located on the west side of the Open Pit. The construction of the West Dump will require the closure and abandonment of the existing Gold Gulch No. 1 PLS Pond, Gold Gulch No. 1A PLS Pond, and Lower Gold Gulch Caisson. The BADCT demonstration for the West Dump is similar to that of the Main Dump regarding the nature of deposited material and drainage capture. The West Dump will cover an area of approximately 235 acres at LOM and will have the capacity for approximately 153 million tons of waste rock. A portion of the dump will overlie the embankment of the Low-Grade Ore Leaching Piles and TSF3. The West Dump's average fill depth will be approximately 280 feet. The run-of-mine rock (types and ratios), alteration and mineral types, and geochemical characterization are identical to the materials currently placed in the Main Dump. Overall slope angles for the surface of the West Dump shall be maintained at approximately 2.5H:1V. The entire dump is situated in the Gold Gulch drainage, which is incised into crystalline bedrock that has a low hydraulic conductivity and currently slopes northwest towards the existing Gold Gulch Dam No. 2 and Reservoir. Two perimeter stormwater diversion channels, West Dump North Channel and West Dump South Channel, shall be constructed north and south of the West Dump respectively. The design of the channels shall incorporate average riprap sizes of between 6 and 9 inches, 1.5-3H:1V channel side slopes, grades of between approximately 1% and approximately 33%, and Armorflex panels for any grades steeper than 10% where flow rates are high. The top will be graded to drain back to the open pit once active mining ceases.
Miscellaneous Facilities
Concentrator The Concentrator Area consists of several related structures and facilities used to recover copper-rich and molybdenum-rich concentrates from sulfide ore. These facilities include primary and secondary crushing, and intermediate ore storage; the main

Table 10: PERMITTED FACILITIES AND BADCT
Concentrator where grinding and froth flotation are performed; concentrated and tailings thickeners; various storage tanks that are exempt from APP and are used for concentrate and water; reagent preparation; and concentrate handling. Runoff from the Concentrator Area is directed to APP-regulated storage facilities because of the presence of intermediate ore stockpiles. The concentrate facility is located in above ground tanks and is exempt from APP regulation. Runoff from the Concentrator Area will be contained by downstream seepage/stormwater retention facilities as described in the approved plans submitted with the original APP application. The run-off impoundments associated with the Concentrator Area are listed in this permit as discharging facilities and shall be operated and inspected according to Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION .
Solid Waste Landfill The Solid Waste Landfill is an unlined facility located within the pollutant management area of this aquifer protection permit. The landfill has obtained authorization for disposal of solid waste pursuant to the Disposal General Permit: Non-Municipal Solid Waste Landfills at Mining Operations (A.A.C. R18-13-802). This facility is located 100 percent within the PCCZ.
Wastewater Treatment Plant Sewage from most buildings in the main plant area is delivered by gravity to the WWTP via a subgrade pipeline system. The WWTP is a factory built, Smith & Loveless Model 20-B-25 Oxigest extended aeration-type sewage treatment plant that consists of primary and secondary treatment. The primary filtration system removes large solids and trash from the system. After primary filtration, the effluent is gravity-fed to a secondary treatment system consisting of an aerobic degradation system. The effluent is treated by injecting air into the receiving tank to increase the oxygen content of the incoming effluent and to provide agitation of the tank. The WWTP is designed to meet the treatment performance criteria for existing facilities as specified in A.A.C. R18-9-B205.
Open Pit The Open Pit is located northeast of the Concentrator in the Gold Gulch drainage area and is the source of ore and waste rock. The Pinto Valley ore body contains chalcopyrite, pyrite, and minor molybdenite as the only significant primary sulfide minerals and is hosted in the Lost Gulch quartz monzonite. Although there was mining between 1943 and 1953, development of the current mining operation began in 1972. The pit is dewatered by numerous vertical wells and pumps. Various catchments and associated diversion ditches prevent stormwater runoff from the surrounding hillsides from impacting the south and northeast areas of the wall slopes of the Open Pit. This facility is the source of the PCCZ. This permit authorizes storing stormwater and/or process water in the Open Pit during operations and temporary cessation. BADCT for the pit shall consist of maintaining the pit as containment by preventing the water level from exceeding an elevation of 3,270 feet amsl except for brief periods of time during emergency situations. The exception for emergency situations is not to exceed 30 days in length without written pre-approval of ADEQ. The stored water may be reclaimed to the extent practicable or allowed to evaporate if uses for it cannot be found. Ponds G, H, J, K and L collect stormwater and are exempt from regulation as surface impoundments pursuant to A.R.S. §49-250(B)(10) but are a part of BADCT for the Open Pit. These ponds intercept stormwater runoff from adjacent watersheds to prevent water from flowing into the pit. Stormwater from these ponds is piped to Cottonwood Reservoir.

Table 10: PERMITTED FACILITIES AND BADCT
Open Pit The Open Pit is located northeast of the Concentrator in the Gold Gulch drainage area and is the source of ore and waste rock. The Pinto Valley ore body contains chalcopyrite, pyrite, and minor molybdenite as the only significant primary sulfide minerals and is hosted in the Lost Gulch quartz monzonite. Although there was mining between 1943 and 1953, development of the current mining operation began in 1972. The pit is dewatered by numerous vertical wells and pumps. Various catchments and associated diversion ditches prevent stormwater runoff from the surrounding hillsides from impacting the south and northeast areas of the wall slopes of the Open Pit. This facility is the source of the PCCZ. This permit authorizes storing stormwater and/or process water in the Open Pit during operations and temporary cessation. BADCT for the pit shall consist of maintaining the pit as containment by preventing the water level from exceeding an elevation of 3,270 feet amsl except for brief periods of time during emergency situations. The exception for emergency situations is not to exceed 30 days in length without written pre-approval of ADEQ. The stored water may be reclaimed to the extent practicable or allowed to evaporate if uses for it cannot be found. Ponds G, H, J, K and L collect stormwater and are exempt from regulation as surface impoundments pursuant to A.R.S. §49-250(B)(10) but are a part of BADCT for the Open Pit. These ponds intercept stormwater runoff from adjacent watersheds to prevent water from flowing into the pit. Stormwater from these ponds is piped to Cottonwood Reservoir.
Gold Gulch PLS Ponds The following facilities will continue to be used as permitted, until they are closed in-place upon construction of the West Dump.
Gold Gulch No. PLS Pond, Gold Gulch No. 1A PLS Pond & Lower Gold Gulch Caisson The Gold Gulch No. 1 and Gold Gulch No. 1A PLS ponds, and the Lower Gold Gulch Caisson will be closed in-place and buried under the newly permitted West Dump. These ponds will be closed following construction of the Gold Gulch No. 2 Process Solution Pond (see Section 2.2.1.1.5). Closure of the Gold Gulch PLS Ponds will be in conjunction with the closure of the West Dump. Gold Gulch No. 1 and Gold Gulch No. 1A, collect PLS from the Low-grade Ore Leaching Piles. Two spillways from Gold Gulch No. 1 to Gold Gulch No. 1A act as an elevation control, preventing overtopping and freeboard exceedances. Gold Gulch No. 1 PLS Pond was located approximately 3,000 feet west of the Open Pit. It was constructed between 1975 and 1976 and was an existing structure at the time of permitting. Gold Gulch No. 1 PLS Pond was designed to capture PLS produced in the Low-grade Ore Leaching Piles as it flows to the head of Gold Gulch from beneath the piles. It was lined with compacted low-permeability materials with an estimated hydraulic conductivity of 1x 10-3 cm/sec or less and subsequently served as a sedimentation basin for settling of sediment prior to flow of PLS to Gold Gulch No. 1A. The pond was largely filled with 2-inch to 6-inch drainage material (quartzite) and covered with a 60-foot high buttress in 2007. Gold Gulch No. 1 PLS Pond also collected stormwater runoff from the immediate vicinity of the PLS pond. PLS now flows through the former Gold Gulch No. 1 PLS Pond to Gold Gulch No. 1A PLS Pond. From there, PLS is pumped to the SX-EW Plant for recovery of copper. Stormwater management practices shall continue to route stormwater runoff to Gold Gulch Dam No. 2 and Reservoir until the existing Gold Gulch No. 1 and Gold Gulch No. 1A PLS Ponds are closed in-place. During construction of the West Dump, two perimeter stormwater diversion channels shall be constructed north and south of the West Dump. Both channels, West Dump North Channel and West Dump South Channel, will ultimately discharge into an energy dissipater at the upstream end of Gold Gulch No. 2 Process Solution Pond. Gold Gulch No. 1A PLS Pond receives PLS from Gold Gulch No. 1 PLS Pond from one of two spillways: the North Spillway and the South spillway pipe. Gold Gulch No. 1A PLS Pond is double-lined with geomembrane and includes a leak collection and recovery system (LCRS). The LCRS is monitored in accordance with Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION and Section 2.5 of this permit. The capacity of Gold Gulch No. 1A PLS Pond shall be designed and maintained per BADCT criteria to eliminate the possibility of overflow. The holding capacity of this pond is approximately 423 acre-feet with 4.25 feet of freeboard. The pond

Table 10: PERMITTED FACILITIES AND BADCT
shall be operated and maintained to prevent overtopping or berm breaches. In the event of an emergency, solution feed shall be diverted to the SX-EW Plant to prevent overflow. Design of this pond includes the Lower Gold Gulch Caisson, a concrete sump that collects PLS for pumpage back to the SX-EW Plant. The design of Gold Gulch No. 1A PLS Pond was based on flows to the SX-EW Plant. The impoundment employs an under-drain cutoff trench keyed into bedrock to capture any PLS migrating under the impoundment. This cut off trench is used to prevent flow to the underlying bedrock aquifer. These facilities are operated and inspected according to the requirements in Section 4.2, Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION. The South Spillway between the two PLS ponds is a 36-inch-diameter, HDPE pipe installed at a 1.0 percent grade. The higher elevation is at the inlet in Gold Gulch No. 1 PLS Pond and the lower elevation is at the discharge into Gold Gulch No. 1A PLS Pond. The materials used in spillway construction include controlled low-strength material, HDPE geomembrane liner material, a geonet drainage layer, and HDPE large-diameter profile wall non-pressure pipe. The South Spillway culvert pipe shall be operated such that the solution surface at the pipe inlet for normal operation conditions shall be maintained to an elevation no greater than 1 foot below the existing spillway invert elevation of 3,525.5 feet amsl.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 11: LEAK COLLECION AND REMOVAL SYSTEM MONITORING				
Identification	**AL1 gallons per day (gpd)**	**AL2 (gpd)**	**Monitoring Method**	**Monitoring Frequency**
Gold Gulch No. 1A Leak Detection Sump[1]	14,887	99,245	Automated	Continuous
Gold Gulch No. 2 Process Solution Pond Leak Detection Sump	23,667	157,778	Automated	Continuous

NOTE: The Alert Level 1 (AL1) or Alert Level 2 (AL2) shall be exceeded when the amount of leakage pumped from the sump for the pond is greater than the applicable quantity below. Contingency requirements of Sections 2.6.2.2 and 2.6.2.3 shall be followed for AL1 and AL2 exceedances, respectively. An exceedance of AL1 or AL2 is not a violation of the permit unless the permittee fails to perform actions as required under the Sections referenced above.

Table 12: TAILINGS DEPOSITION MONITORING (TSF3 and TSF4)		
Maximum Deposition Limit (MDL)	**Monitoring Frequency**	**Reporting Frequency**
32,000,000 tons annually	Annually	Annual in site Log Book

[1] Upon construction of the Gold Gulch No. 2 Process Solution Pond, the Gold Gulch No. 1 and Gold Gulch No. 1A PLS Ponds will be closed in-place.

Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION [2]			
Facility Name	**Operational Requirement (Performance Level)**	**Inspection Frequency**	**Reporting Requirements**
Gold Gulch No. 1 PLS Pond, Gold Gulch No. 1A PLS Pond, North and South Spillways, and Gold Gulch No. 2 Process Solution Pond (not yet constructed)	No visible cracks, holes or leaks in liner; discharge pump in good working order; no evidence of seepage; maintain 2' of freeboard (not applicable to Gold Gulch No. 1 PLS Pond); spillway maintained free of debris, sediments. vegetation, or other obstructions; no substantial erosion, subsidence, cracking or other damage to berm or dam; collection sump pumps working properly; backup power generator in good working order; no impairment of access to leak detection and gravity drain system; leak detection and gravity drain system in good working order. Ensure that spillways are operating properly. Liner materials shall be maintained in good working order.	Daily and after rainfall ≥3 inches in 24 hours	Exceeded berm, seepage, structural integrity, overtopping standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.
No. 1 Upper Basin, No. 1 Lower Basin, Upper Catchment/ Upper Pond, Upper Catchment/ Lower Pond, East Catchment, West Catchment, Gold Gulch Dam No. 2 and Reservoir (to be removed upon completion of upgrade to a lined facility)	No substantial erosion, subsidence, cracking, piping, sloughing, or sliding of dams and berms; No visible seepage from dams and berms; pumps in good working order; backup power supply operational; No exceedances of BMP required surge capacity; 2 feet minimum freeboard.	Weekly and after rainfall ≥3 inches in 24 hours, and/or after a natural disaster;	Exceeded berm, seepage, structural integrity, overtopping and freeboard standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.
	Liquid storage capacity maintained at 80 percent of design volume	Annually and after rainfall ≥3 inches in 24 hours and/or after a natural disaster	Shall be documented in the Log Book and be reported in the Annual Report.
Peeples Pond Road Crossing Pond	Maintain minimum 2 feet of freeboard, no visible cracks, holes or leaks in liner; pumps in good working order; no excessive sedimentation; no vegetation or other obstructions; conveyance structures free of debris; anchor trench integrity is maintained; embankment integrity is maintained.	Weekly and after rainfall ≥3 inches in 24 hours	Exceedance of freeboard, seepage, structural integrity, overtopping standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.

[2] No SMRF reporting is required for this table, however inspections and any repairs shall be recorded in a log as required by Sections 2.2.4 and 2.7.2..

Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION [2]			
Facility Name	**Operational Requirement (Performance Level)**	**Inspection Frequency**	**Reporting Requirements**
Raffinate Pond	No substantial erosion, subsidence, cracking, piping, sloughing, or sliding of dams and berms. No visible cracks, desiccation and differential settlement. No impairment of embankment integrity. No excess erosion in conveyances and diversions. No excessive accumulation of debris in conveyances and diversions. No access impairment. No visible seepage from dams and berms. 2 feet minimum freeboard. Proper pump operation and structural integrity at pump locations, valves, and structures.	Weekly and after rainfall ≥ 3 inch in 24-hours	Exceeded berm, seepage, structural integrity, overtopping and freeboard standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.
Upper Tule Pond, Lower Tule Pond, North Pond, Slack/Conklin Pond, Canyon Dam, Able Pond, Gold Gulch Final Catchment, Baker Pond, Rosa's Pond, Cottonwood Reservoir	No substantial erosion, subsidence, cracking, piping, sloughing, or sliding of dams and berms. No visible cracks, desiccation and differential settlement. No impairment of embankment integrity. No excess erosion in conveyances and diversions. No excessive accumulation of debris in conveyances and diversions. No access impairment. No visible seepage from dams and berms. 2 feet minimum freeboard. Proper pump operation and structural integrity at pump locations, valves, and structures.	Weekly and after rainfall ≥3 inches in 24-hours	Exceeded berm, seepage, structural integrity, overtopping and freeboard standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.
No. 1 Seepage Toe Drain and Caisson, Lower Tule Caisson, Cottonwood Seepage Caisson System, East Catchment Caisson	Free of debris, sediments, vegetation, or other obstructions; no impairment of access; system working properly; pumps in good working order; backup power supply operational	Weekly	Log Book and Annual Report
TSF2	No visible evidence of crest failure, no visible slips at toe, no substantial cracks or erosion features. Check open standpipe piezometers and vibrating wire piezometers for proper operation and no obstructions.	Quarterly and after rainfall ≥3 inches in 24 hours (except for incline-meters)	Exceeded Structural integrity standards shall be reported per Section 2.7.3, all others response actions shall be documented in the Log Book and be reported in the Annual Report.
TSF3	No visible evidence of tailings or buttress crest failure, no visible slips at toe, no substantial cracks or erosion features. Visually inspect berms for structural integrity. A	Quarterly and after rainfall ≥3 inches in 24 hours (except for incline-meters)	Exceeded Structural integrity standards shall be reported per Section 2.7.3, all other response

Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION [2]			
Facility Name	**Operational Requirement (Performance Level)**	**Inspection Frequency**	**Reporting Requirements**
	minimum 3 feet freeboard is required, measured from the surface of the supernatant decant pool to the lowest point on the TSF3 embankment. Check open standpipe piezometers and vibrating wire piezometers for proper operation and no obstructions. The ultimate dam height shall not exceed 3,860 feet at the end of mining.		actions shall be documented in the Log Book and be reported in the Annual Report.
TSF4 (includes the NBD and SBD)	No visible evidence of crest failure, no visible slips at toe, no substantial cracks or erosion features. Visually inspect berms for structural integrity. A minimum 5 feet of freeboard required for dams, measured from the surface of the supernatant pool to the lowest point of the TSF4 main embankment and boundary dams. The ultimate dam height shall not exceed 4,250 feet amsl at the end of mining. The minimum beach distance of 1,500 feet shall be maintained at this facility during normal operating conditions, and a minimum of 400 feet following a 100-year, 24-hour storm event. A minimum of 8 piezometers shall be installed and the water levels shall be measured to ensure the phreatic surface is maintained within safe operating limits per Section 4.2, Table 14: PIEZOMETER MONITORING. Standpipe piezometers and vibrating wire piezometers shall be checked for proper operation and no obstructions.	Quarterly and after rainfall ≥3 inches in 24 hours (except for incline-meters)	Exceeded Structural integrity standards shall be reported per Section 2.7.3, all other response actions shall be documented in the Log Book and be reported in the Annual Report.
Northside Waste Rock Dumps, Southside Waste Rock Dump, 19 Extension Dump, Castle Dome Marginal Dump, Main Dump, West Dump	No substantial slips at toe. No substantial evidence of crest failures. If facility has not yet been constructed, the inspections are to be performed when the facility has been constructed.	Quarterly	Per Section 2.7.3
Stormwater run-on/runoff control features and berms	Maintained to divert run-on and prevent stormwater from ponding on	Monthly and after a significant storm or natural disaster,	Per Section 2.7.3

Table 13: FACILITY OPERATION AND BADCT PERFORMANCE INSPECTION [2]			
Facility Name	**Operational Requirement (Performance Level)**	**Inspection Frequency**	**Reporting Requirements**
protecting closed in-place facilities	closed in-place facilities. No visible erosion or other damage that may impact berm integrity or stability.	regardless of operating status	
Freeboard in all impoundments until closure configuration results achieved and contain non-contact stormwater only	Maintain at least 2 feet of freeboard from top of berm, except in those impoundments equipped with spillway at a specific elevation that are designed to discharge to the next impoundment down line or to the outfall under a valid AZPDES permit (perform response actions per Section 2.6.2.2)	Monthly and after a significant storm or natural disaster, regardless of operating status	Per Section 2.7.3
POC Wells and Alert Wells	Well cap in place and no visible damage to casing	Quarterly	Annual Report
Impoundment Fluid Level	No unexpected or sudden loss of fluid (perform response actions per Section 2.6.3.1)	Monthly and after a significant storm or natural disaster, regardless of operating status	Per Section 2.7.3
Solid Waste Landfill	This facility has obtained authorization for disposal of solid waste pursuant to the Disposal General Permit: Non-Municipal Solid Waste Landfills at Mining Operations (A.A.C. R18-13-802). Operational requirements are covered under the General Permit.	N/A	N/A
Wastewater Treatment Plant	No structural damage; Distribution box free flowing; Entrance pipe clear; Effluent water clear; Air flow adequate.	Monthly and after rainfall ≥3 inches in 24 hours	Operational response actions shall be documented in the Log Book and be reported in the Annual report

Table 14: PIEZOMETER MONITORING			
Piezometer ID	**Alert Level for Phreatic Surface Elevation (feet amsl)**	**Latitude**	**Longitude**
TSF1			
23C	3552	33° 23’ 43.25”	110° 59’ 00.67”
28P/PP3A	3752	33° 23’ 51.69”	110° 58’ 57.32”
PP2A	3757	33° 23’ 50.26”	110° 58’ 44.14”
TSF2			
I3	3697	33° 24’ 36.57”	110° 59’ 07.45”
P9	3755	33° 24’ 31.46”	110° 59’ 04.45”
DH04-T12-14P	3756	33° 24’ 26.37”	110° 59’ 05.87”
TSF3			
2	3395	33° 25’ 12.45”	110° 59’ 49.84”
13	3440	33° 24’ 36.57”	110° 59’ 07.45”
14	3450	33° 25’ 07.79”	110° 59’ 46.43”
I12	3520	33° 25’ 05.78”	110° 59’ 44.05”
15A-1	3660	33° 25’ 04.20”	110° 59’ 42.72”
5	3480	33° 25’ 05.56”	110° 59’ 14.72”
6	3537	33° 25’ 03.38”	110° 59’ 16.11”
9	3536	33° 25’ 03.53”	110° 59’ 19.10”
11	3615	33° 25’ 00.07”	110° 59’ 20.30”
I13	3615	33° 24’59.81”	110° 59’ 20.20”
12A-1	3705	33° 24’ 57.94”	110° 59’ 23.57”
TSF4			
AH-04-T4-27P	3,316	33° 27’ 9.13”	110° 59’ 36.13”
P3A	3,530	33° 27' 2.88"	110° 59' 31.56"
P7	3,663	33° 27’ 2.71”	110° 59’ 25.97”
P8	3,673	33° 27’ 0.39”	110° 59’ 28.25”
P9	3,895	33° 26’ 59.34”	110° 59’ 23.07”
P10 (future)	3,833	33° 26’ 57.05”	110° 59’ 20.63”
P11 (future)	3,883	33° 26’ 54.92”	110° 59’ 17.63”
P12 (future)	3,916	33° 26’ 52.53”	110° 59’ 14.70”

NOTE: If replacement of a piezometer is necessary due to malfunction, the permittee may install a replacement piezometer in the same general location, or additional piezometers as necessary may be added and no permit amendment is required. The locational information may be updated in the permit during any future amendment.

Table 15: PIT CONTAINMENT MONITORING						
Well Name	**ADWR Number**	**Latitude**	**Longitude**	**Measuring Point Elevation**	**Well Name**	**ADWR Number**
APP-1A	55-543407	33° 27’ 25” N	110° 58’ 43” W	3588.99	200	90-190
APP-1Br	55-563251	33° 27’ 25” N	110° 58’ 43” W	3590.50	485	370-450
APP-2	55-543406	33° 27’ 16” N	110° 59’ 46” W	3170.30	250	140-240
APP-3A	55-543404	33° 25’ 34” N	110° 59’ 59” W	3168.50	48	23.6-43.6
APP-3B	55-543405	33° 25’ 34” N	110° 59’ 59” W	3166.26	250	145-245
APP-4	55-543403	33° 25’ 21” N	111° 00’ 03” W	3256.29	153	45-145
APP-5A	55-543402	33° 23’ 42” N	110° 59’ 07” W	3468.41	35	25-35
APP-5B	55-553712M	33° 23’ 42” N	110° 59’ 07” W	3471.51	200	92-192
APP-6	55-543401	33° 23’ 36” N	110° 58’ 57” W	3516.00	135	24-114
APP-7	55-560644	33° 22’ 58” N	110° 59’ 25” W	3442.61	124	58-118
GTI-MW-3	55-525044	33° 23’ 13” N	110° 58’ 10”W	3878.58	81	19-79
GTI-MW-4	55-525043	33° 23’ 01” N	110° 58’ 11”W	3886.34	81	19-79
GTI-MW-5	55-526381	33° 23’ 13” N	110° 57’ 60”W	3947.45	100	50-100
MW-04-01	–	33° 22’ 31” N	110° 58’ 09”W	3740.07	103	40-100
MW-04-02	55–900604	33° 22’ 46” N	110° 57’ 39”W	4026.85	100	50-100
MW-04-03	55–900605	33° 23’ 06” N	110° 58’ 36”W	3581.65	90	40-90
MW-04-04	55–900606	33° 23’ 22” N	110° 59’ 06”W	3484.35	153	100-150
MW-04-06	55–900635	33° 23’ 53” N	110° 59’ 16”W	3882.67	100	70-100
MW-04-07	–	33° 24’ 04” N	110° 58’ 42”W	4003.88	400	280.5-320.5
MW-04-10	55–900632	33° 24’ 58” N	110° 58’ 42”W	4131.2	497	290-340
MW-04-12	55–900633	33° 26’ 50” N	110° 59’ 23”W	3347.35	320	290-320
MW-04-13	55–900672	33° 24’ 25” N	110° 58’ 36”W	4032.08	515	484-514
Shop Site 2	55-612354	33° 23’ 05” N	110° 57’ 55” W	4023.37	1510	40-1510
South 8	–	33° 23’ 28” N	110° 57’ 54” W	4098.60	600	–
Southeast 1B	–	33° 23’ 55” N	110° 57’ 37” W	4022.69	200	–
West 32	–	33° 23’ 38” N	110° 58’ 16” W	3985.98	690	–
West 33	–	33° 23’ 56” N	110° 58’ 24” W	3824.89	800	–
BMW08-1	-	33 23' 02.4" N	110 58' 18.6" W	3709	6	-
BMW08-10	-	33 27' 41.4" N	110 59' 55.1" W	2994.3	8	-
BMW08-10A	-	33 27' 38.4" N	110 59' 54.8" W	2997.1	7	-
BMW08-6	-	33 25' 34.3" N	111 00' 05.2" W	3168	18	-
CDX-3	-	33 24' 21" N	110 56' 47" W	4540.2	1110	-
Cowboy 10	-	33 24' 13" N	110 56' 47" W	4538	460	-
DH08-11	-	33 24' 09.9" N	110 58' 43.8" W	3907.64	300	-
DH08-12	-	33 24' 00.8" N	110 58' 23.5" W	3908.55	299	-
DH08-31	-	33 24' 00.2" N	110 57' 57.7" W	4139.32	301	-
Domestic 2	-	33 23' 15" N	110 58' 24" W	3845	465	-
DW-08-2	-	33 24' 43.6" N	110 58' 32.0" W	3869.79	1338	-
Miller Springs 1	-	33 23' 40" N	110 58' 23" W	3808.58	1150	200-600
MW-16-100	-	33 26' 04" N	110 58' 01" W	3996.41	335.1	-
MW-16-200	-	33 25' 39" N	110 57" 36" W	4688.88	690	-
PZ08-02	-	33 24' 00.0" N	110 58' 04.3" W	4101.25	1301	-
PZ08-04	-	33 24' 25.3" N	110 58' 28.5" W	3839.62	1210	-
PZ08-05	-	33 24' 36.5" N	110 58' 34.5" W	3785.61	1100	-
PZ08-08	-	33 25' 08.0" N	110 58' 10.0" W	4192.33	1517	-
PZ08-13	-	33 24' 10.6" N	110 58' 44.7" W	3879.50	1518.00	-

Table 15: PIT CONTAINMENT MONITORING						
Well Name	**ADWR Number**	**Latitude**	**Longitude**	**Measuring Point Elevation**	**Well Name**	**ADWR Number**
PZ08-14	-	33 24' 01.4" N	110 58' 23.9" W	3905.81	1520	-
PZ08-15	-	33 24' 32.6" N	110 58' 55.3" W	3908.91	1500	-
PZ08-6A	-	33 24' 44.6" N	110 58' 50.6" W	4038.42	1250	-
PZ14-17	-	33 24' 09" N	110 58' 16" W	3817.17	383	-
PZ14-18	-	33 24' 14" N	110 58' 22" W	3820.31	925.5	-
PZ14-19	-	33 24' 58" N	110 58' 04" W	4212.06	1002	-
PZ14-20	-	33 25' 07" N	110 57' 33" W	4399.40	1002	-
S08-7	-	33 24’ 03.4" N	110 58' 40".7 W	4034.37	515	-
S08-9	-	33 25’ 16.8" N	110 58' 15.0" W	4248.93	230	-
Shopsite 1	55-640814	33 23' 39.3" N	110 58' 06.7" W	3886.00	150	-
South 38	-	33 24’ 09” N	110 58’ 14” W	4092.65	530	-
TSF3-9	-	33 25' 32" N	110 59' 47" W	3226.46	150.00	-
U-8-4	-	33 27' 15" N	110 58' 40" W	3816.13	125	-

Parameter	Monitoring Frequency	Reporting frequency	Criteria for Action
Open Pit water level	Annually	Annually	Pit water level greater than 3,270 feet amsl triggers contingency requirements per Section 2.6.2.7.

4.3. GROUNDWATER MONITORING

Table 16: MONITOR WELL LOCATIONS AND MONITORED FACILITIES FOR GROUNDWATER MONITORING				
Identifier	**ADWR Number**	**Latitude**	**Longitude**	**Facility Monitoring**
HAZARDOUS AND NONHAZARDOUS POINTS OF COMPLIANCE				
GROUNDWATER POC MONITORING LOCATIONS				
APP-1A	55-543407	33° 27' 25" N	110° 58' 43" W	TSF4, above fault zone
APP-1Br	55-563251	33° 27' 25" N	110° 58' 43" W	TSF4, below fault zone
APP-2	55-543406	33° 27' 16" N	110° 59' 46" W	TSF4, Eastwater Canyon
APP-3A	55-543404	33° 25' 34" N	110° 59' 59" W	Gold Gulch
APP-3B	55-543405	33° 25' 34" N	110° 59' 59" W	Gold Gulch
APP-4	55-543403	33° 25' 21" N	111° 00' 03" W	TSF3
APP-5A	55-543402	33° 23' 42" N	110° 59' 07" W	No. 1 Seepage
APP-5B	55-553712M	33° 23' 42" N	110° 59' 07" W	No. 1 Seepage
APP-6	55-543401	33° 23' 36" N	110° 58' 57" W	Miller Gulch
North Draw 1	N/A[3]	33° 25' 38" N	111° 00' 00" W	Baker Pond
MG1-6b/ Homestead Springs	N/A	33° 24' 54" N	111° 00' 05" W	TSF3
SPRING POC MONITORING LOCATIONS				
North Draw 1	N/A	33° 25' 38" N	111° 00' 00" W	Baker Pond
MG1-6b/ Homestead Springs	N/A	33° 24' 54" N	111° 00' 05" W	TSF3
ALERT MONITORING LOCATIONS				
SPRINGS/SEEPS				
MG1-12b/ Spring Gold Gulch 1	N/A	33° 25' 31" N	110° 59' 43" W	Gold Gulch
MG1-7a/ Raffinate Pond Monitoring Point (seep)	N/A	33° 24' 33" N	110° 59' 17" W	Raffinate Pond
ALERT WELL				
APP-7 (Ground-water well)	55-560644	33° 22' 58" N	110° 59' 25" W	Gold Gulch

[3] N/A = not applicable

Table 17: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS											
Parameter	**Units**	**APP-1A**		**APP-1Br**		**APP-2**		**APP-3A**		**APP-3B**	
		AQL	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**
Field pH	S.U.	M[4]	M	M	M	M	M	M	M	M	M
Field temperature	degrees F	M	M	M	M	M	M	M	M	M	M
Field specific conductance	µmhos/cm	M	M	M	M	M	M	M	M	M	M
Total dissolved solids	mg/L	M	M	M	M	M	M	M	M	M	M
Sulfate	mg/L	M	M	M	M	M	M	M	M	M	M
Fluoride	mg/L	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Nitrate-nitrite as N[5]	mg/L	10.0	8.0	10.0	8.0	10.0	8.0	10.0	8.0	10.0	8.0
Antimony	mg/L	0.006	0.0048	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	0.05	0.04
Beryllium	mg/L	0.004	0.0032	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	0.005	0.004
Cobalt	mg/L	M	M	M	M	M	M	M	M	M	M
Copper	mg/L	M	M	M	M	M	M	M	M	M	M
Iron	mg/L	M	M	M	M	M	M	M	M	M	M
Lead	mg/L	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Manganese	mg/L	M	M	M	M	M	M	M	M	M	M
Nickel	mg/L	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Selenium	mg/L	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Zinc	mg/L	M	M	M	M	M	M	M	M	M	M

Parameter	**Units**	**APP-4**		**APP-5A**		**APP-5B**		**APP-6**	
		AQL	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**
Field pH	S.U.	M	M	M	M	M	M	M	M
Field temperature	degrees F	M	M	M	M	M	M	M	M
Field specific conductance	µmhos/cm	M	M	M	M	M	M	M	M
Total dissolved solids	mg/L	M	M	M	M	M	M	M	M
Sulfate	mg/L	M	M	M	M	M	M	M	M
Fluoride	mg/L	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Nitrate-nitrite as N[6]	mg/L	10.0	8.0	10.0	8.0	10.0	8.0	10.0	8.0
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
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
Cobalt	mg/L	M	M	M	M	M	M	M	M
Copper	mg/L	M	M	M	M	M	M	M	M
Iron	mg/L	M	M	M	M	M	M	M	M
Lead	mg/L	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Manganese	mg/L	M	M	M	M	M	M	M	M
Nickel	mg/L	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Selenium	mg/L	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Zinc	mg/L	M	M	M	M	M	M	M	M

NOTES:

1) All metals and radiochemical analyses shall be for dissolved metals/radionuclides.

[4] M = monitor only
[5] Nitrate-nitrite as N may be expressed as nitrate as N plus nitrite as N.
[6] Nitrate-nitrite as N may be expressed as nitrate as N plus nitrite as N.

Table 18: QUARTERLY GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS								
Parameter	**Units**	**Spring Groundwater POC Monitoring Points**				**Alert Monitoring Locations**		
		MG1-6b		**North Draw 1**		**MG1-12b**	**MG1-7a**	**APP-7**
		AQL	**AL**	**AQL**	**AL**	**AL**	**AL**	**AL**
Field pH	S.U.	M[7]	M	M	M	M	M	M
Field temperature	degrees F	M	M	M	M	M	M	M
Field specific conductance	µmhos/cm	M	M	M	M	M	M	M
Total dissolved solids	mg/L	M	M	M	M	M	M	M
Sulfate	mg/L	M	M	M	M	M	M	M
Fluoride	mg/L	N/A	N/A	N/A	N/A	3.2	3.2	3.2
Nitrate-nitrite as N[8]	mg/L	10.0	8.0	10.0	8.0	8.0	8.0	8.0
Antimony	mg/L	0.006	0.0048	0.006	0.0048	0.0048	0.0048	0.0048
Arsenic	mg/L	0.05	0.04	0.05	0.04	0.04	0.04	0.04
Beryllium	mg/L	0.004	0.0032	0.004	0.0032	0.0032	0.0032	0.0032
Cadmium	mg/L	0.005	0.004	0.005	0.004	0.004	0.004	0.004
Cobalt	mg/L	M	M	M	M	0.25	0.25	M
Copper	mg/L	M	M	M	M	0.1	0.1	M
Iron	mg/L	M	M	M	M	M	0.43	M
Lead	mg/L	0.05	0.04	0.05	0.04	0.04	0.04	0.04
Manganese	mg/L	M	M	M	M	M	1.8	M
Nickel	mg/L	0.10	0.08	0.10	0.08	0.08	0.08	0.08
Selenium	mg/L	0.05	0.04	0.05	0.04	0.04	0.04	0.04
Zinc	mg/L	M	M	M	M	0.25	0.25	M
Gross alpha	pCi/L	N/A	N/A	N/A	N/A	M	M	N/A

NOTES:

1) All metals and radiochemical analyses shall be for dissolved metals/radionuclides.

[7] M = monitor only
[8] Nitrate-nitrite as N may be expressed as nitrate as N plus nitrite as N.

Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS											
Parameter	**Units**	**APP-1A**		**APP-1Br**		**APP-2**		**APP-3A**		**APP-3B**	
		AQL	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**
Lab pH	S.U.	M	M	M	M	M	M	M	M	M	M
Lab specific conductance	µmhos/cm	M	M	M	M	M	M	M	M	M	M
Chloride	mg/L	M	M	M	M	M	M	M	M	M	M
Carbonate	mg/L	M	M	M	M	M	M	M	M	M	M
Bicarbonate	mg/L	M	M	M	M	M	M	M	M	M	M
Total Alkalinity	mg/L	M	M	M	M	M	M	M	M	M	M
Calcium	mg/L	M	M	M	M	M	M	M	M	M	M
Magnesium	mg/L	M	M	M	M	M	M	M	M	M	M
Potassium	mg/L	M	M	M	M	M	M	M	M	M	M
Sodium	mg/L	M	M	M	M	M	M	M	M	M	M
Cation/anion balance	%	M	M	M	M	M	M	M	M	M	M
Aluminum	mg/L	M	M	M	M	M	M	M	M	M	M
Barium	mg/L	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6
Chromium (total)	mg/L	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Cyanide (total)	mg/L	M	0.16	M	0.16	M	0.16	M	0.16	M	0.16
Mercury	mg/L	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Thallium	mg/L	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Gross alpha	pCi/L	M	M	M	M	M	M	M	M	M	M
Adjusted gross alpha[9]	pCi/L	15	12	15	12	15	12	15	12	15	12
Radium 226+228[10]	pCi/L	5	4	5	4	5	4	5	4	5	4
Uranium (combined)	µg/L	M	M	M	M	M	M	M	M	M	M

[9] The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).
[10] Total radium is expressed as the sum of radium-226 plus radium-228.

Table 19: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR POC WELLS (Continued)									
Parameter	**Units**	**APP-4**		**APP-5A**		**APP-5B**		**APP-6**	
		AQL	**AL**	**AQL**	**AL**	**AQL**	**AL**	**AQL**	**AL**
Lab pH	S.U.	M	M	M	M	M	M	M	M
Lab specific conductance	µmhos/cm	M	M	M	M	M	M	M	M
Chloride	mg/L	M	M	M	M	M	M	M	M
Carbonate	mg/L	M	M	M	M	M	M	M	M
Bicarbonate	mg/L	M	M	M	M	M	M	M	M
Total Alkalinity	mg/L	M	M	M	M	M	M	M	M
Calcium	mg/L	M	M	M	M	M	M	M	M
Magnesium	mg/L	M	M	M	M	M	M	M	M
Potassium	mg/L	M	M	M	M	M	M	M	M
Sodium	mg/L	M	M	M	M	M	M	M	M
Cation/anion balance	%	M	M	M	M	M	M	M	M
Aluminum	mg/L	M	M	M	M	M	M	N/A	N/A
Arsenic	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	0.05	0.04
Barium	mg/L	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6
Beryllium	mg/L	N/A	N/A	0.004	0.0032	N/A	N/A	N/A	N/A
Cadmium	mg/L	N/A	N/A	0.005	0.004	N/A	N/A	N/A	N/A
Chromium (total)	mg/L	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Cobalt	mg/L	N/A	N/A	M	M	N/A	N/A	N/A	N/A
Cyanide (total)	mg/L	M	0.16	M	0.16	M	0.16	M	0.16
Lead	mg/L	0.05	0.04	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	mg/L	0.10	0.08	N/A	N/A	N/A	N/A	N/A	N/A
Thallium	mg/L	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Gross alpha	pCi/L	M	M	M	M	M	M	M	M
Adjusted gross alpha[11]	pCi/L	15	12	15	12	15	12	15	12
Radium 226+228[12]	pCi/L	5	4	5	4	5	4	5	4
Uranium (combined)	µg/L	M	M	M	M	M	M	M	M

[11] The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).
[12] Total radium is expressed as the sum of radium-226 plus radium-228.

Table 20: BIENNIAL GROUNDWATER COMPLIANCE MONITORING FOR SPRING POC MONITORING POINTS AND ALERT MONITORING LOCATIONS								
Parameter	**Units**	**Spring Groundwater POC Monitoring Points**				**Alert Monitoring Locations**		
		MG1-6b		**North Draw 1**		**MG1-12b**	**MG1-7a**	**APP-7**
		AQL	**AL**	**AQL**	**AL**	**AL**	**AL**	**AL**
Lab pH	S.U.	M	M	M	M	M	M	M
Lab specific conductance	µmhos/cm	M	M	M	M	M	M	M
Chloride	mg/L	M	M	M	M	M	87	M
Fluoride	mg/L	4	0.32	4	0.32	N/A	N/A	N/A
Carbonate	mg/L	M	M	M	M	M	5	M
Bicarbonate	mg/L	M	M	M	M	M	739	M
Total Alkalinity	mg/L	M	M	M	M	M	M	M
Calcium	mg/L	M	M	M	M	M	792	M
Magnesium	mg/L	M	M	M	M	M	168	M
Potassium	mg/L	M	M	M	M	M	17	M
Sodium	mg/L	M	M	M	M	145	140	M
Cation/anion balance	%	M	M	M	M	M	M	M
Aluminum	mg/L	M	M	M	M	M	3.0	M
Barium	mg/L	2	1.6	2	1.6	1.6	1.6	1.6
Chromium (total)	mg/L	0.1	0.08	0.1	0.08	0.08	0.08	0.08
Cyanide (total)	mg/L	0.2	0.16	0.2	0.16	0.16	0.16	0.16
Mercury	mg/L	0.002	0.0016	0.002	0.0016	0.0016	0.0016	0.0016
Thallium	mg/L	0.002	0.0016	0.002	0.0016	0.0016	0.0016	0.0016
Gross alpha	pCi/L	M	M	M	M	N/A	N/A	M
Adjusted gross alpha[13]	pCi/L	15	12	15	12	12	12	12
Radium 226+228[14]	pCi/L	5	4	5	4	4	4	4
Uranium (combined)	µg/L	M	M	M	M	M	M	M

NOTES:

1) All metals and radiochemical analyses shall be for dissolved metals/radionuclides.

[13] The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).
[14] Total radium is expressed as the sum of radium-226 plus radium-228.

4.4. DISCHARGE MONITORING

Table 21: ROUTINE DISCHARGE MONITORING – WWTP					
Sampling Point Number	**Sampling Point Identification**			**Latitude**	**Longitude**
001	Downstream of the chlorination tank on the effluent line			33° 23' 17" N	110° 58' 24" W
Parameter	**AL**[15]	**DL**[16]	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Flow[17]: Daily[18]	Not established	Not established	gpd	Daily	Quarterly
Total Flow: Monthly Average[19]	23,750	25,000	gpd	Monthly Calculation	Quarterly
Fecal Coliform Single-sample maximum	No Limit	800	MPN[20]	Daily[21]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[22]	No Limit	200[23]	MPN	Weekly Calculation	Quarterly
Total Nitrogen[24]: Five-sample rolling geometric mean[25]	Not established	Not established	mg/L[26]	Monthly Calculation	Quarterly

[15] AL = Alert Level
[16] DL = Discharge Limit
[17] Total flow for all methods of disposal
[18] Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[19] Monthly average of daily flow values
[20] MPN = Most Probable Number / 100 ml sample. A value of <2.2 shall be considered to be non-detect.
[21] For fecal coliform **only**, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four samples in each week are obtained and analyzed.
[22] **Week** means a seven-day period starting on Sunday and ending on the following Saturday. The reporting form for this parameter consists of 13 weeks per quarter.
[23] Fecal coliform four (4) of seven (7) samples requires entering "Compliance" or "Non-compliance" on the SMRF for each week of the reporting period. Evaluate the daily fecal coliform results for that week (Sunday through Saturday). If, of these seven (7) days, four (4) or more of the daily fecal coliform results are non-detect, report "Compliance" for that week's entry on the SMRF. If three (3) or fewer of the daily fecal coliform results are non-detect, report "Non-compliance for that week's entry on the SMRF.
[24] Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[25] The 5-sample rolling geometric mean is determined by multiplying the 5 most recent monthly sample values together then taking the fifth root of the product. *Example:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$
[26] "mg/L" means milligrams per liter

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:	5/20/2022
Contingency Plan, dated:	11/4/2015

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 on the amount of daily influent or discharge of pollutants in gallons per day (gpd) as established by A.R.S. § 49-242.

6.2. 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.

6.3. 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 (AWQS) at the applicable point of compliance (POC) 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.

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

6.6. 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; 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.

6.7. 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. §§ 49-1009, 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 authorized by this permit.

6.10. 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 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).