

STATE OF ARIZONA  
AQUIFER PROTECTION PERMIT NO. P-100507  
PLACE ID 4296, LTF 83923  
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 ASARCO LLC to operate the facilities listed within this permit at the ASARCO Hayden Operations located near the town of Hayden, Arizona, over the groundwater of the Gila River groundwater basin.

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:** ASARCO LLC – Hayden Operations  
**Facility Address:** 866 N. Hayden Avenue  
Hayden, Gila County, Arizona 85135

**County:** Gila County

**Permitted Flow Rate:** 10 million gallons per day (gpd) or more

**Permittee:** ASARCO LLC  
**Permittee Address:** Hayden Operations  
P.O. Box 8  
Hayden, Arizona 85135

**Facility Contact:** Amy Veek  
**Emergency Phone No.:** (520) 356-3296

**Latitude/Longitude:** 33° 00' 15" N, 110° 46' 59" W  
**Legal Description:** Parts of Sections 8-12, 14-16, 21-23, and 26-28, Township 5 South, Range 15 East of the Gila and Salt River Base Line and Meridian.

### 1.2. AUTHORIZING SIGNATURE

\_\_\_\_\_  
**Trevor Baggio, Director**  
Water Quality Division  
Arizona Department of Environmental Quality  
Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

**THIS AMENDED PERMIT SUPERCEDES ALL PREVIOUS PERMITS**

**TABLE OF CONTENTS**

1.1. PERMITTEE INFORMATION ..... 1

1.2. AUTHORIZING SIGNATURE ..... 1

**2.0 SPECIFIC CONDITIONS..... 5**

2.1. FACILITY / SITE DESCRIPTION ..... 5

    2.1.1. Annual Registration Fee ..... 7

    2.1.2. Financial Capability..... 7

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT) ..... 7

    2.2.1. Engineering Design ..... 7

    2.2.2. Site-Specific Characteristics..... 7

    2.2.3. Pre-Operational Requirements..... 7

    2.2.4. Operational Requirements ..... 7

    2.2.5. Certified Areawide Water Quality Management Plan Conformance ..... 8

2.3. DISCHARGE LIMITATIONS ..... 8

    2.3.1. Process Solution Impoundments..... 8

    2.3.2. Non-Stormwater Impoundments ..... 8

2.4. POINT OF COMPLIANCE (POC)..... 8

2.5. MONITORING REQUIREMENTS ..... 9

    2.5.1. Routine Discharge Monitoring ..... 9

    2.5.2. Reclaimed Water Monitoring ..... 9

    2.5.3. Facility / Operational Monitoring..... 9

    2.5.4. Groundwater Monitoring And Sampling Protocols..... 9

        2.5.4.1. POC Well Replacement ..... 10

        2.5.4.2. Ambient Groundwater Quality Monitoring for Point of Compliance and Alert Level Wells.... 10

        2.5.4.3. Alert Levels for Point of Compliance and Alert Level Wells..... 10

        2.5.4.4. Aquifer Quality Limits for Point of Compliance Wells ..... 11

        2.5.4.5. Compliance Groundwater Quality Monitoring for Point of Compliance and Alert Level Wells  
                11

    2.5.5. Surface Water Monitoring And Sampling Protocols ..... 12

    2.5.6. Analytical Methodology ..... 12

    2.5.7. Installation And Maintenance Of Monitoring Equipment..... 12

2.6. CONTINGENCY PLAN REQUIREMENTS ..... 12

    2.6.1. General Contingency Plan Requirements ..... 12

    2.6.2. Exceeding Of Alert Levels And Performance Levels ..... 13

        2.6.2.1. Exceeding Of Performance Levels Set For Operational and Non-Operational Conditions, and  
                Buttress Construction..... 13

        2.6.2.2. Exceeding Of Alert Levels (ALs) Set For Discharge Monitoring..... 13

        2.6.2.3. Exceeding Of Alert Levels In Groundwater Monitoring ..... 13

            2.6.2.3.1. Alert Levels For Indicator Parameters ..... 13

            2.6.2.3.2. Alert Levels For Pollutants With Numeric Aquifer Water Quality Standards..... 13

            2.6.2.3.3. Alert Levels To Protect Downgradient Users From Pollutants Without Numeric Aquifer Water Quality  
                        Standards ..... 15

            2.6.2.3.4. Alert Level For Groundwater Level ..... 15

    2.6.3. Discharge Limitations Violations ..... 15

        2.6.3.1. Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid ..... 15

        2.6.3.2. Overtopping of a Surface Impoundment..... 16

        2.6.3.3. Inflows of Unexpected Materials to a Surface Impoundment..... 17

        2.6.3.4. Slope and Berm Failures ..... 17

    2.6.4. Aquifer Quality Limit Exceedances ..... 17

    2.6.5. Emergency Response And Contingency Requirements For Unauthorized Discharges ..... 18

        2.6.5.1. Duty To Respond ..... 18

- 2.6.5.2. *Discharge Of Hazardous Substances Or Toxic Pollutants* ..... 18
- 2.6.5.3. *Discharge Of Non-Hazardous Materials* ..... 19
- 2.6.5.4. *Reporting Requirements* ..... 19
- 2.6.6. **Corrective Actions** ..... 19
- 2.7. REPORTING AND RECORDKEEPING REQUIREMENTS** ..... 19
  - 2.7.1. **Self-Monitoring Report Form** ..... 19
  - 2.7.2. **Operation Inspection / Log Book Recordkeeping** ..... 20
  - 2.7.3. **Permit Violation And Alert Level Status Reporting** ..... 20
  - 2.7.4. **Operational, Other Or Miscellaneous Reporting** ..... 21
    - 2.7.4.1. *Annual Report* ..... 21
  - 2.7.5. **Reporting Location** ..... 22
  - 2.7.6. **Reporting Deadline** ..... 22
  - 2.7.7. **Changes To Facility Information In Section 1.0** ..... 22
- 2.8. TEMPORARY CESSATION** ..... 22
- 2.9. CLOSURE** ..... 23
  - 2.9.1. **Closure Plan** ..... 23
  - 2.9.2. **Closure Completion** ..... 23
- 2.10. POST-CLOSURE** ..... 24
  - 2.10.1. **Post-Closure Plan** ..... 24
  - 2.10.2. **Post-Closure Completion** ..... 24
- 3.0 COMPLIANCE SCHEDULE** ..... **25**
- 4.0 TABLES OF MONITORING REQUIREMENTS** ..... **27**
  - 4.1. **PERMITTED FACILITIES AND BADCT** ..... 27
  - 4.2. **COMPLIANCE AND OPERATIONAL MONITORING** ..... 36
- 5.0 REFERENCES AND PERTINENT INFORMATION** ..... **49**
- 6.0 NOTIFICATION PROVISIONS** ..... **50**
  - 6.1. **ANNUAL REGISTRATION FEES** ..... 50
  - 6.2. **DUTY TO COMPLY** ..... 50
  - 6.3. **DUTY TO PROVIDE INFORMATION** ..... 50
  - 6.4. **COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS** ..... 50
  - 6.5. **TECHNICAL AND FINANCIAL CAPABILITY** ..... 50
  - 6.6. **REPORTING OF BANKRUPTCY OR ENVIRONMENTAL ENFORCEMENT** ..... 50
  - 6.7. **MONITORING AND RECORDS** ..... 50
  - 6.8. **INSPECTION AND ENTRY** ..... 51
  - 6.9. **DUTY TO MODIFY** ..... 51
  - 6.10. **PERMIT ACTION: AMENDMENT, TRANSFER, SUSPENSION, AND REVOCATION** ..... 51
- 7.0 ADDITIONAL PERMIT CONDITIONS** ..... **52**
  - 7.1. **OTHER INFORMATION** ..... 52
  - 7.2. **SEVERABILITY** ..... 52
  - 7.3. **PERMIT TRANSFER** ..... 52

**TABLE OF TABLES**

TABLE 1: DISCHARGING FACILITIES ..... 6

TABLE 2: POINT(S) OF COMPLIANCE ..... 8

TABLE 3: ACCELERATED MONITORING - ALERT LEVEL EXCEEDANCE ..... 14

TABLE 4: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION ..... 18

TABLE 5: QUARTERLY SMRF REPORTING DEADLINES ..... 22

TABLE 6: BIENNIAL SMRF REPORTING DEADLINE ..... 22

TABLE 7: ANNUAL REPORTING DEADLINE ..... 22

TABLE 8: COMPLIANCE SCHEDULE ITEMS ..... 25

TABLE 9: PERMITTED FACILITIES AND BADCT ..... 27

TABLE 10: FACILITY INSPECTION AND OPERATIONAL MONITORING ..... 36

TABLE 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING ..... 43

TABLE 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION ..... 44

TABLE 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING ..... 46

TABLE 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING ..... 47

**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 Hayden Operations primarily include the following components:

- Assay and metallurgical laboratories (2)
- Solid waste landfills (2)
- Primary copper smelter
- Concentrate and byproduct storage areas
- Slag deposition areas (active and inactive)
- Rail and truck acid loading stations and storage tanks
- Sulfuric acid plant, concentrate filter plant and lime slaker
- Petroleum product storage area
- Copper ore concentrator and crusher
- Vehicle wash racks
- Water treatment plant
- Inactive limestone quarry
- AB-BC and D Tailings Impoundments

Hayden receives sulfide ore from the Ray Mine via the Copper Basin Railway, which delivers 3-5 trains per day of 40-60 cars having a 100-ton capacity each. Secondary and tertiary crushing, conveying, and rod and ball milling are performed. This is followed by flotation, filtering and smelting. Tailings generated in the flotation process are deposited at the AB-BC and D tailings impoundments. Low grade slag resulting from the smelting process is deposited in the slag deposition area. Higher grade slag and some byproducts are recycled through the crushing, milling, and flotation systems.

During the copper extraction process, procedures are employed to minimize waste products. Water is recycled within the process. Sulfuric acid, produced as a co-product from air pollution control equipment at the smelter is either used at the Ray Mine or sold. Copper anodes produced by the Hayden Smelter contain over 99 percent copper. The primary source of fresh water for the Hayden Operations is wells located near the Gila and San Pedro Rivers.

The Hayden Operations receives B+ effluent from the Town of Hayden Wastewater Treatment Plant. This treated water is piped to the milling process stream. Effluent quality will be monitored under the separate Town of Hayden Wastewater Treatment Plant APP.

The tailing slurry is spigotted around the periphery of the tailings impoundments, and water is reclaimed from the central areas of the impoundments where it ponds during active deposition. The reclaimed water is conveyed by pipeline to basins adjacent to the reclaim pump station near the Hayden Golf Course and then pumped to storage/head tanks for re-use in the grinding and flotation processes. In the event of a power outage, the in-process tailing volume flows by gravity to an emergency pond on the lower elevation of the tailing disposal facility. Accumulated material in the emergency pond is removed as needed to the upper areas of the tailing structure.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES					
Facility No.	Facility Name	Latitude <sup>1</sup> NAD1927	Longitude NAD1927	Northing <sup>2</sup>	Easting
D42	AB-BC Tailings Impoundment	32.998906	-110.800386	728924	842243
D42.2	Tailings Last Chance Basin	33.00438284	-110.8193739	730857	836402
E1	D Tailings Impoundment	32.988086	110.820618	724922	836081
E2	D Tailings Maintenance Pond	32.982116	-110.792044	722784.3	845081.3
D42.3	Emergency Pump-back Ponds	32.987019	-110.792082	724626	844835
	Decant Pond	33.01081435	-110.7870436	733302	846289
D1	Smelter Last Chance Pond	33.01081435	-110.7870436	733302	846289
D23	Concentrator Runoff Pond (Winn's Pond)	33.00126174	-110.7838189	729837	847315
D28.5	Smelter Lined Impoundment	33.00014412	-110.7784909	729448	848953
D28.7	Smelter Main Gate impoundment	33.00255356	-110.7768813	730330	849437
D34	CP-1	33.00378807	-110.7718262	730796	850982
D39	East Ponds (west)	33.00079713	-110.7678694	729721	852207
D39	East Ponds (east)	33.00077488	-110.7672435	729715	852399
D39.1	South Ponds	32.99801581	-110.7696732	728703	851665
D42.1	Water Reclamation Ponds (includes Contingency Ponds)	32.98615047	-110.7798575	724352	848589
D8	Concentrator Solid Waste Landfill	33.01420043	-110.7800816	734557	848410
D32	Smelter Landfill	33.00547094	-110.7704182	731413	851407
D3.2	Concentrate Storage Area (closed in place)	33.01177366	-110.7825103	733666	847675
D25.2	Petroleum Coke Storage Area (closed in place)	33.00497882	-110.7767033	731213	849482
D19.1A	Truck Wash Facility	33.00633984	-110.7788712	731701	848812

Table 1: DISCHARGING FACILITIES					
Facility No.	Facility Name	Latitude <sup>1</sup> NAD1927	Longitude NAD1927	Northing <sup>2</sup>	Easting
D21.1	Concentrator Wash Rack	33.00831976	-110.780493	732416	848307
D30.6	Smelter Truck Wash	33.00531807	-110.7741287	731345	850270

**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). 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 estimated dollar amount for facility closure and post-closure is at \$9,429,126 and \$1,764,962, respectively for a total of \$11,194,088. The financial assurance mechanism was demonstrated through a surety bond issued by Westchester Fire Insurance Company Surety Bond Number K1533504A pursuant to A.A.C. R18-9-A203(C)(2). The permittee shall also establish a Standby Trust Fund in accordance with A.A.C R18-9-A203(C)(2)(g) as required by the Compliance Schedule, Section 0 of this permit.

**2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)**

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

The treatment facility shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.R.S. §49-243(B) and A.A.C. R18-9-A202(A)(5).

**2.2.1. Engineering Design**

See Table 9 for descriptions of BADCT for each permitted facility.

**2.2.2. Site-Specific Characteristics**

Site specific characteristics were not used to determine BADCT.

**2.2.3. Pre-Operational Requirements**

Not applicable to this permit amendment.

**2.2.4. Operational Requirements**

- At a minimum, permitted facilities shall be inspected for performance levels listed in Section 4.2, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING. Monitoring shall also be conducted during non-operational and construction phases of the AB-BC Tailings Impoundment as per Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING and Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS

<sup>1</sup> Latitude and Longitude are in NAD1927

<sup>2</sup> Northings and Easting are in State Plane, Arizona Central, Int. Feet, NAD1927.

CONSTRUCTION respectively. Results of these inspections and monitoring activities shall be documented and maintained on location for at least 10 years, as required by Section 2.7.2 of this permit.

2. The pollution control structures shall be inspected for the items listed in Section 0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING.
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in the event of a violation or exceedance as per Section 2.7.3.
4. If during any phase, unstable conditions are observed at the AB-BC Tailings Impoundment, the permittee shall implement procedures outlined in the document under this amendment titled “ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.

**2.2.5. Certified Areawide Water Quality Management Plan Conformance**

[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Areawide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

**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 listed below to prevent, unauthorized discharges as defined in A.R.S. § 49-201(12) that result from failure or bypassing of BADCT pollutant control technologies including, but not limited to, liner failure , uncontrollable leakage, overtopping (e.g., exceeding the maximum storage capacity, defined as a fluid level exceeding the crest elevation of a permitted impoundment), berm breaches that result in an unexpected loss of fluid or accidental spills. The discharge limitations in this section are not applicable to any discharge caused by precipitation in excess of a single design storm event or process overflow during a power outage exceeding 24 hours in duration

**2.3.1. Process Solution Impoundments**

The process solution impoundments are designed and authorized to receive and contain process solutions, stormwater, and process upset events.

**2.3.2. Non-Stormwater Impoundments**

The permitted non-stormwater impoundments are authorized to receive and contain stormwater runoff and run-on, and process solutions as a result of storm events or process upset events.

**2.4. POINT OF COMPLIANCE (POC)**

[A.R.S. § 49-244]

The Points of Compliance (POCs) have been established at the following locations:

Table 2: POINT(S) OF COMPLIANCE				
Well No.	Designation	Latitude (North)	Longitude (West)	ADWR No.
H-1R	Hazardous/Non-Hazardous	33° 00' 34"	110° 49' 39"	55-923367
H-3	Hazardous/Non-Hazardous	32° 59' 43"	110° 49' 08"	55-535507
H-5	Hazardous/Non-	32° 59' 56"	110° 48' 48"	55-535508



Table 2: POINT(S) OF COMPLIANCE				
Well No.	Designation	Latitude (North)	Longitude (West)	ADWR No.
	Hazardous			
H-6	Hazardous/Non-Hazardous	32° 59' 52"	110° 45' 58"	55-535504
H-8	Hazardous/Non-Hazardous	33° 00' 10"	110° 47' 31"	55-539676
MW-2B	Hazardous/Non-Hazardous	32° 59' 51.65"	110° 46' 54.58"	55-921357

Monitoring requirements for each Point of Compliance are listed in Section 0. The Director may amend this permit to designate additional points of compliance 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. Routine Discharge Monitoring**

Not required by this permit.

**2.5.2. Reclaimed Water Monitoring**

Not required by this permit.

**2.5.3. Facility / Operational Monitoring**

Operational monitoring inspections shall be conducted according to Section 0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING.

If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in case of a violation or exceedance as per Section 2.7.3.

**2.5.4. Groundwater Monitoring And Sampling Protocols**

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 Reporting Form

(SMRF).

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

**2.5.4.1. POC Well Replacement**

In the event that one or more of the designated POC wells should become unusable or inaccessible due to damage, exceedance of an alert level (AL) for water level as required by Section 2.6.2.3.4 (3), or any other event, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is fifty feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well. Otherwise, the ALs and/or AQLs shall be set following the provisions in Section 2.5.4.3 and Section 2.5.4.4 of this permit.

**2.5.4.2. Ambient Groundwater Quality Monitoring for Point of Compliance and Alert Level Wells**

Eight consecutive quarterly groundwater samples shall be completed to establish existing ambient groundwater quality conditions for evaluating any short-term or long-term changes in water quality. Each ambient groundwater sample, as applicable, shall be analyzed for the parameters listed in Section 4.0,

Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING

Facility ID	Facility Name	Inspection	Performance Level
D42	AB-BC Tailings Impoundment	<p><b>Quarterly:</b> Quarterly inspections shall be completed by the EOR. The purpose of the inspections is to observe and assess the physical condition of the TSF. Information collected, and observations made during each quarterly monitoring/inspection visit shall be presented on a summary report.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan for the TSF (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> <li>• Observing large portions of the dam for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions.</li> </ul>	<p>Freeboard: 4 feet Beach: 300 feet</p> <p>Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability</p>
		<p><b>Annually:</b> Annual inspections shall be completed by the EOR with the participation of the Responsible Tailings Facility Person and the Regional Geotechnical Manager. The purpose of these inspections is to observe and assess the physical condition of the TSF. An annual report prepared, signed and sealed by the EOR, shall present a summary, interpretation and evaluation of the collected inspection and monitoring data. The annual report shall be submitted to ADEQ.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Walking and observing TSF major components, including the main dams, secondary dams, benches, checking dams, groins, toe, buttress (once constructed), seepage collection ponds, deposition points, and portions of the tailings delivery lines.</li> <li>• Collecting photos of the components observed.</li> <li>• Preparing a list of recommendations if any and present to site management personnel.</li> </ul>	NA

Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION			
Facility ID	Facility Name	Inspection	Performance Level
D42	AB-BC Tailings Impoundment	<p><b>Daily:</b> The facility geotechnical instrumentation data shall be reviewed by the EOR.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> </ul>	Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.
		<p><b>Weekly:</b> The facility operator shall complete weekly inspection reports. The weekly inspection reports will relate to his/her respective facility, area, and/or equipment.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Observing the facility for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability.</li> <li>• Each abnormal condition will be evaluated as soon as practicable by site management and reported to the EOR.</li> </ul>	<p>Freeboard: 4 feet Beach: 300 feet</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability</p>
		<p><b>Monthly:</b> The facility operator and EOR will complete monthly inspections. The purpose of the monthly inspection is to observe and assess buttress construction activities.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Review action items from the previous monthly inspection.</li> <li>• Inspect the tailings delivery line, seepage collection, decant pond, embankment, and channels.</li> <li>• Assess deposition areas and operational freeboard conditions.</li> <li>• Visit problematic areas reported by operational personnel.</li> </ul>	NA
		<p><b>Quarterly:</b> Quarterly inspections will be completed by the EOR. The purpose of the inspections is to observe and assess the physical condition of the TSF. Information collected, and observations made during each quarterly monitoring/inspection visit are presented on a summary report.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the</li> </ul>	NA

Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION			
Facility ID	Facility Name	Inspection	Performance Level
		<p>frequencies proposed in the Instrumentation and Monitoring Plan for the TSF (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</p> <ul style="list-style-type: none"> <li>• Observing large portions of the dam for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions.</li> </ul>	
		<p><b>Annually:</b> Annual inspections will be completed by the EOR with the participation of the Responsible Tailings Facility Person and the Regional Geotechnical Manager. The purpose of these inspections is to observe and assess the physical condition of the TSF. An annual report prepared, signed and sealed by the EOR, will present a summary, interpretation and evaluation of the collected inspection and monitoring data. The annual report will be submitted to ADEQ.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Walking and observing TSF major components, including the main dams, secondary dams, benches, checking dams, groins, toe, buttress (once constructed), seepage collection ponds, deposition points, and portions of the tailings delivery lines.</li> <li>• Collecting photos of the components observed.</li> <li>• Preparing a list of recommendations if any and present to site management personnel.</li> </ul>	

Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING

**2.5.4.3. Alert Levels for Point of Compliance and Alert Level Wells**

Alert levels (AL) shall be calculated for all contaminants with established AWQS for any new or replacement POC wells.

For each new or replacement well referenced in Section 2.4, the Permittee shall submit the ambient groundwater monitoring data in tabulated form to the ADEQ Groundwater Protection Value Stream for review as required by the Compliance Schedule, Section 3.0. Copies of all laboratory analytical reports, field notes, the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analysis of the samples, and a report including the statistical calculation of the alert levels (ALs) and aquifer quality limits (AQLs) for all parameters listed in Section 4.0, Table 4.2.3 to be established for each well, shall be included. The Permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by ADEQ. The ALs shall be established and calculated by the following

formula, or another valid statistical method submitted to the Groundwater Protection Value Stream in writing and approved for this permit by the Groundwater Protection Value Stream.

$$AL = \bar{x} + K\Phi$$

Where  $\bar{x}$  = mean,  $\Phi$  = 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) using a K value of 3.188 for eight samples from Table 1 of the Lieberman 1958 report. 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:

The AL will be calculated for a parameter using the analyses from a minimum of eight consecutive, quarterly, sample rounds. The Permittee shall not use more than 12 sample rounds in the calculation.

Any data where the practical quantitation limit PQL exceeds 80% of the AWQS shall not be included in the AL calculation.

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.

If the analytical results from more than 50 percent of the samples for a specific parameter are non-detect, then the AL shall be set at 80 percent of the AWQS.

If the calculated AL for a specific constituent and well is less than 80 percent of the AWQS, the AL shall be set at 80 percent of the AWQS for that constituent in that well.

**2.5.4.4. Aquifer Quality Limits for Point of Compliance Wells**

AQLs will be established in the permit for all parameters listed in Section 4.0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING and Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING for which a numeric AWQS has been adopted. For each of the monitored analytes for which a numeric AWQS has been adopted, the AQL shall be established as follows:

If the calculated AL is less than the AWQS, then the AQL shall be set equal to the AWQS.

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

**2.5.4.5. Compliance Groundwater Quality Monitoring for Point of Compliance and Alert Level Wells**

Quarterly compliance groundwater monitoring in each Point of Compliance (POC) well shall commence within the first calendar quarter after the effective date of this permit and within the first calendar quarter after completion of ambient groundwater sampling period for new and replacement wells. The parameters to be analyzed for quarterly compliance monitoring are listed in Section 4.0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING. In addition to quarterly compliance groundwater monitoring for parameters listed in Section 4.0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING for Point of Compliance wells, an additional list of parameters shall be monitored at each POC well every 8<sup>th</sup> quarter (biennial). For the biennial monitoring events, the additional parameters listed in Section 4.0, Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING shall be analyzed.

The Permittee may submit a written request to the Groundwater Protection Value Stream to reduce the

monitoring parameters in either the Quarterly or the Biennial Compliance Groundwater Monitoring Tables (Section 4.0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING or Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING) in accordance with the following criteria:

1. The parameter in question has not been detected for at least two consecutive biennial or four consecutive quarterly monitoring events in the well. The PQL reported by the laboratory shall be less than 80% of the established numeric AWQS.
2. The Permittee shall submit a written report indicating the parameter(s) proposed for modification, accompanied by supporting data, including laboratory analytical reports and quality assurance/quality control data, to the ADEQ Groundwater Protection Value Stream for review.
3. Upon review, the Groundwater Protection Value Stream will determine if the modification(s) requested is justified and approved. The respective changes, if approved, shall require an amendment to the permit.

#### **2.5.5. Surface Water Monitoring And Sampling Protocols**

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

#### **2.5.6. Analytical Methodology**

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable contingency requirements of Section 2.6 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. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

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

#### **2.5.7. Installation And Maintenance Of Monitoring Equipment**

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the Groundwater Protection 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 approved contingency and emergency response plan(s) 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 had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit.

## **2.6.2. Exceeding Of Alert Levels And Performance Levels**

### **2.6.2.1. Exceeding Of Performance Levels Set For Operational and Non-Operational Conditions, and Buttress Construction**

For freeboard performance levels, the permittee shall comply with the requirements as specified in Section 0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING, Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING, and Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION to prevent the overtopping of an impoundment or sludge drying bed. If an impoundment or sludge drying bed is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.

If a performance level set in Section 0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING, Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING, and Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION has been exceeded the permittee shall:

1. Notify the Groundwater Protection Value Stream within five (5) days of becoming aware of the exceedance.
2. Submit a written report to the Groundwater Protection Value Stream within 30 days after becoming aware of the exceedance. The report shall document all of the following:
  - a. A description of the exceedance and the cause of the exceedance;
  - b. The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;
  - c. Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;
  - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
  - e. Any malfunction or failure of pollution control devices or other equipment or process.
3. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.



**2.6.2.2. Exceeding Of Alert Levels (ALs) Set For Discharge Monitoring**

Not applicable.

**2.6.2.3. Exceeding Of Alert Levels In Groundwater Monitoring**

**2.6.2.3.1. Alert Levels For Indicator Parameters**

None required by this permit.

**2.6.2.3.2. Alert Levels For Pollutants With Numeric Aquifer Water Quality Standards**

1. In the case of an exceedance of an AL for a pollutant set in Section 0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING or Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING, the permittee may conduct verification sampling for those pollutant(s) that exceeded their respective AL(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.
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 each pollutant exceeding its' respective AL(s) as follows:

Table 3: ACCELERATED MONITORING - ALERT LEVEL EXCEEDANCE	
Specified Monitoring Frequency	Monitoring Frequency for AL Exceedance
Daily	Daily
Weekly	Daily
Monthly	Weekly
Quarterly	Monthly
Semi-annually	Quarterly
Annually	Quarterly

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. If the verification sample does not confirm that an exceedance has occurred, the permittee shall notify ADEQ of the results and assume there has been no exceedance. No further action will then be required under this subsection.

3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Protection Value Stream, that although an AL has been exceeded, the pollutant(s) that exceeded 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 exceeded 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 each pollutant that exceeded an AL, 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 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, amendments to permit conditions or other actions.
6. For each pollutant that exceeded an AL, the increased monitoring required as a result of an AL exceedance may be reduced to the monitoring frequency in Section 0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING and Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING as applicable, if the results of three (3) sequential sampling events of those pollutants demonstrate that they did not exceed the AL.
7. If the increased monitoring required as a result of an AL exceedance continues for more than four (4) sequential sampling events, the permittee shall submit to ADEQ a second report documenting an investigation of each pollutant which continued to exceed an AL. This report is due within 30 days of the receipt of laboratory results of the fourth sampling event.

**2.6.2.3.3. Alert Levels To Protect Downgradient Users From Pollutants Without Numeric Aquifer Water Quality Standards**

None required by this permit.

**2.6.2.3.4. Alert Level For Groundwater Level**

None required by this permit.

**2.6.3. Discharge Limitations Violations**

1. If a DL set in Section 0 has been violated, the permittee shall immediately investigate to determine the cause. 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 violation;
  - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
  - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Protection Value Stream 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. 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, notification of downstream or downgradient users who may be directly affected by the discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

2. 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.

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

In the event of liner failure, containment structure failure, or unexpected loss of fluid as described in Section 2.3, the Permittee shall take the following actions:

1. As soon as practicable, cease or minimize all discharges to the surface impoundment as

necessary to prevent any further releases to the environment.

2. Within 24-hours of discovery, notify the ADEQ Groundwater Protection Value Stream.
3. Within five days of discovery of a failure that resulted in a release to the subsurface, collect representative samples of the fluid remaining in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.0,. Within 30 days of the incident, submit a copy of the analytical results to ADEQ 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 surface impoundment 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 surface impoundment. The Permittee shall not resume discharging to the surface impoundment 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.
5. As soon as practicable, remove fluid remaining in the surface impoundment as necessary to prevent further releases to the subsurface and/or to perform repairs. Record in the facility log/recordkeeping file the amount of fluid removed, a description of the removal method, and other disposal arrangements. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection / Log/Recordkeeping File).
6. Within 30 days of discovery of the incident, submit a report to ADEQ as specified in Section 2.7.3 (Permit Violation and AL 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 sixty (60) days of discovery, conclude an assessment of the impacts to the subsoil and/or groundwater resulting from the incident. 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, within 120 days of discovery Permittee shall 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.
8. 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, mitigation, 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 the ADEQ Groundwater Protection Value Stream.
3. Within five days, collect representative samples of the fluid contained in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING and Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING. Within 30 days of the incident, submit a copy of the analytical results to ADEQ 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 4.0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING. Record in the facility log, the amount of fluid removed, a description of the removal method, and the disposal arrangements. 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, 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 AL 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 Subsection 3 above, conclude 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, within 120 days of discovery Permittee shall 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, mitigation, 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 the ADEQ Groundwater Protection Value Stream.
3. Within five 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 Permit Violation and AL Status Reporting). Include a description of the actions performed in Subsections 1 through 3 listed above. Upon review of the report, ADEQ may request additional monitoring or remedial actions.
5. Upon review of the report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, mitigation, or other actions.

**2.6.3.4. Slope and Berm Failures**

If a slope or berm failure involving tailings facilities 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, 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.

**2.6.4. Aquifer Quality Limit Exceedances**

1. If an AQL set in Section 0, Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING or Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING 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.
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:

<b>Table 4: ACCELERATED MONITORING - AQUIFER QUALITY LIMIT VIOLATION</b>	
<b>Specified Monitoring Frequency</b>	<b>Monitoring Frequency for AQL Violation</b>
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 an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.

4. 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.
5. The Permittee shall notify in writing any downstream or down gradient users who may be directly affected by the discharge.

6. The Permittee shall continue monitoring at the increased frequency until the contaminant(s) is below the AQL and AL for at least three consecutive months, or as otherwise directed in an approved mitigation or corrective action plan.

**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 and actions identified in the approved contingency plan referenced in Section 5.0 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 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING
  - b. Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING

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; and
6. Any other information required by this permit to be entered in the log book.
7. Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).

### **2.7.3. Permit Violation And Alert Level Status Reporting**

1. The permittee shall notify the Groundwater Protection Value Stream within five (5) days (except as provided in Section 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 0, Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING 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.

The Permittee shall, upon completion of the biennial sampling described in 4.2.3, submit a monitoring summary report to the Groundwater Protection Value Stream as per compliance schedule item (CSI) No. 9. This report shall be due at the same time as the SMRF form for the biennial sampling event. The report shall include, but not be limited to the following:

1. A description of any deviations from standard sampling protocols during the reporting period.
2. A summary of all exceedances of ALs, AQLs or operational performance levels that occurred during the reporting period.
3. Graphical time versus concentration plots of field pH, sulfate, total dissolved solids, and any parameter which exceeded an applicable AL or AQL in the past eight quarters at each POC well, and tabulated sampling data for all wells required to be sampled by this permit during the last eight quarters.
4. An updated table of all monitor wells and piezometers in the Discharge Impact Area including, but not limited to, location of well, depth of well, depth to water.
5. A summary of any groundwater monitor wells replaced in the reporting period including, but not limited to, location of well, depth of well, depth to water, and screened interval.
6. A list of any new sumps, impoundments, or vehicle washes constructed within the pollutant management area, unless exempt or covered by a general APP.
7. A statement confirming that groundwater levels are within the screened intervals, as



demonstrated in the Evaluation of Existing POC Wells submitted in the June 10, 2017 APP amendment, to ensure the data collected from the POC wells is representative of groundwater quality in the uppermost aquifer through comparison of water levels to well screening intervals.

**2.7.4.1. Annual Report**

The permittee shall submit an annual report as required by CSI No. 8 and Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING, Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING, and Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION. During buttress construction, the annual report will include a description of the construction activities that occurred during the reporting timeframe. Following completion of buttress construction, only the annual reports would be applicable to inspections conducted during the operational and non-operational phases of the project.

**2.7.5. Reporting Location**

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: <http://www.azdeq.gov/welcome-mydeq>

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

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

**2.7.6. Reporting Deadline**

The following table lists the quarterly SMRF report due dates:

Table 5: QUARTERLY SMRF REPORTING DEADLINES	
Monitoring Conducted During Quarter:	Quarterly Report Due By:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the biennial SMRF report due dates:

Table 6: BIENNIAL SMRF REPORTING DEADLINE	
Monitoring Conducted During Biennial Period:	Report Due By:
January 1 <sup>st</sup> of the first year – December 31 <sup>st</sup> of the second year	January 30 and every two years thereafter

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

Table 7: ANNUAL REPORTING DEADLINE	
Monitoring Conducted During the Year:	Annual Report Due By:
January 1–December 31	April 30 <sup>th</sup> 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. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. 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).

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 year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with the AWQS at the applicable POC or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
3. 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(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

**2.10.1. Post-Closure Plan**

Reserved.

**2.10.2. Post-Closure Completion**

Reserved.

**3.0 COMPLIANCE SCHEDULE**

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

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

Table 8: COMPLIANCE SCHEDULE ITEMS			
Item Description	Time to Complete	Requirements	Amendment Required
1: Financial Capability Demonstration	April 1, 2022 and every 6 years thereafter for the duration of the permit	The permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.0, No. 2 below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs, and discharging facilities have not been added. The demonstration shall also include information in support of the performance surety bond as required in A.A.C. R18-9-A203(C)(2) and R18-9-A203(B)(3).	No
2. Updated cost estimate	April 1, 2022 and every 6 years thereafter, for the duration of the permit.	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. Cost estimates are to include any closure and post-closure monitoring costs associated with the AB tailings buttress.	Yes
3. Standby Trust Fund	Within 60 days of receiving a written request and standby trust template from ADEQ.	The permittee shall establish a standby trust fund in accordance with A.A.C. R18-9-A203(C)(2)(g) using the trust template provided by ADEQ and identify the financial institution that is responsible for the trust in accordance with A.A.C. R18-9-A203(B)(3)(c). The permit will be amended upon approval in accordance with R18-9-A203(F).	Yes
4. D Tailings Maintenance Pond (Facility #E2)	Within 90 days of completion of construction	Submit as-built drawings, including cross sections, for the reconstructed pond.	No
5. AB/-BC Tailings (Facility #D42) construction	March 16, 2027	Complete construction of the buttress and other associated upgrades as per the AB-BC TSF Buttress Project Schedule submitted as part of the application, the construction of the buttress and other associated upgrades	
6. Tailings BC Rill Erosion Repairs	March 16, 2027.	Tailings BC rill erosion repairs shall be completed as documented in Attachment 3 and the design drawings	No
7. AB/-BC Tailings (Facility #D42) as-built documents	90 days following completion of the buttress construction and other proposed upgrades	Provide as-built drawings and cross-sections for the buttress and other associated upgrades, and , sealed by an Arizona registered professional engineer.	No

Table 8: COMPLIANCE SCHEDULE ITEMS			
Item Description	Time to Complete	Requirements	Amendment Required
8. Annual Report	April 30, 2022 and annually thereafter	As per Section 2.7.4.1, submit an annual report as required by Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING, Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING, and Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION	No
9. Biennial Report	January 30, 2023 and every two years thereafter.	As per Section 2.7.4, submit a biennial report.	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PERMITTED FACILITIES AND BADCT

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
D42 and D42.3	AB-BC Tailings Impoundment (D42) including Emergency Pump-back Ponds (D42.3)	<p>The AB-BC Tailings Impoundment is located on the North side of the Gila River, and consists of two adjoining tailing storage facilities (TSF), AB TSF and BC TSF, and water reclaim systems. The AB-BC Tailings Impoundment is approximately 10,000 feet long by 4,000 feet wide, covering an area of approximately 1,130 acres. The facility was placed in service in 1911, and the thickness of tailings is approximately 200 feet. The AB-BC Tailings Impoundment also includes the Emergency Pump-back Ponds (D42.3), located within a channel that flows around the base of the impoundment. Decant water from the AB-BC Tailings shall be routed to the Water Reclamation Ponds and Contingency Ponds (D42.1).</p> <p>The AB TSF portion of the facility shall be operated only for dust control or during upset conditions, and the deposition rate shall be restricted to 0.25 foot per year. Four feet of freeboard<sup>3</sup> shall be maintained.</p> <p>The BC TSF portion of the facility shall be operated at a maximum deposition rate of two (2) feet per year, up to the maximum storage elevation of 2,188 feet above mean sea level (amsl). Four feet of freeboard shall be maintained.</p> <p>A buttress shall be constructed and maintained to meet the BADCT prescribed stability safety factors for static and pseudo-static conditions for AB portion of the AB-BC Tailings Impoundment as per design documents and drawings submitted in the amendment application dated August 17, 2020.</p>	N/A

<sup>3</sup> Freeboard for Tailings Impoundments AB-BC and D shall be measured as the vertical distance between the tailings embankment crest elevation and the supernatant pool elevation.

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
		The Emergency Pump Back Ponds/Hillman Ponds shall be enlarged and modified as presented in the design drawings (AB/BC Tailings Buttress Detailed Engineering Submittal for ASARCO LLC - Hayden Operations' Aquifer Protection Permit (APP) No. P-100507 LTF 79697, dated November 11, 2020, prepared by Wood).	
D42.2	Tailings Last Chance Basin	The Tailings Last Chance Basin, located at the northwest end of the AB-BC tailings impoundment, is the farthest down-gradient facility at the Hayden Operations. The Last Chance Basin is contained by an earth and rock fill berm that is five to eight feet high. It covers an area of approximately 54 acres and has a holding capacity of approximately 65 acre-feet. Any overflow from up-gradient stormwater impoundments would ultimately flow to the Tailings Last Chance Basin if flow volumes were sufficiently large. This impoundment also receives runoff from the AB-BC tailings impoundment via channels that run along the perimeter of the tailings impoundment.	65
E1	D Tailings Impoundment	The D Tailings Impoundment is Hayden Operations' primary tailings impoundment at the current time. It is located on the south side of the Gila River, and covers an area of approximately 470 acres. It is estimated that the final footprint will be 1160 acres. Deposition of the starter dam for the D tailings impoundment began in 1981-1982. Buried decant lines drain to the Water Reclamation Ponds (D42.1) on the north side of the Gila and San Pedro Rivers. The tailings impoundment is wedge-shaped, approximately 100 feet thick at the north side to only a few feet thick at the south side. The D Tailings Impoundment shall be operated at a maximum deposition rate of fifteen (15) feet per year, up to the maximum storage elevation of 2326 feet (Hayden Concentrator Datum) Four feet of freeboard <sup>2</sup> shall be maintained. Slope stability analysis indicates the D Tailings Facility meets the BADCT prescribed stability safety factors for static and pseudo-static conditions, as described the AMEC July 16, 2013 Report.	N/A
E2	D Tailings Maintenance Pond	The D-Tailings Maintenance Pond receives drain down from the D-Tailings Impoundment pipeline a minimum of 3 to 4 times per year during line maintenance and mill shutdown. This pond is excavated in the alluvial plain of the Gila River, approximately 800 feet from the active channel. Tailing from the D-Tailings Impoundment pipeline enters the pond via an inlet pipe.	3.10

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
		<p>The pond is constructed using a minimum of six inches of compacted tailings over an engineered compacted sub-base. The compacted tailings are topped with 10 to 12- inches of native decomposed granite to serve as an indicator layer for protection of the liner during maintenance. The design capacity of the pond is 3.10 acre-feet. The pond is approximately 10-feet deep with internal side-slopes of 2H:1V on three sides and 4H:1V on the fourth side to allow loader entrance for maintenance. The pond has sufficient capacity to retain the 100-year 24-hour storm event while maintaining 2-feet of freeboard. The external side slopes include a 12-inch layer of decomposed granite to allow for natural revegetation and erosion control.</p>	
D1	Smelter Last Chance Pond	<p>The Smelter Last Chance Pond (SLCP), a non-stormwater pond, is part of a site-wide system that is designed to control stormwater runoff at the Hayden Operations. The SLCP is located immediately south of the closed Kennecott Slag Dump. The SLCP receives runoff from the Concentrate Storage Area (closed in place) and from the Lime Slaking Plant Area through a pump-back station to the SLCP. The SLCP is constructed using a single 60-mil High Density Polyethylene (HDPE) geomembrane liner over an engineered compacted sub-base. The SLCP has a total volume of 9.2 acre-feet (2,997,833 gallons); approximately 16-feet deep; internal side-slopes of no less than 3H:1V; and has sufficient capacity to retain the 100-year 24-hour storm event while maintaining 2-feet of freeboard.</p>	8.8



Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
No Facility ID	Decant Pond	The Decant Pond, a non-stormwater pond, receives rainfall and overflow from the Concentrate Filter Plant Containment Sump. The Decant Pond is located approximately 700-feet southeast of the Concentrate Filter Plant. The Decant Pond liner system consists of (from bottom to top): minimum 6” compacted subgrade, 40 mil High Density Polyethylene (HDPE) liner, 175 mil geonet, and 60 mil textured HDPE liner. The liner system is secured in an engineered anchor trench. A leak detection sump is located in the southeast corner of the pond, constructed between the two HDPE liners. The pond capacity, while maintaining 2-feet of freeboard, is 4.83 acre-feet. Internal side slopes are no steeper than 2.5H:1V. Fluid collected in the Decant Pond is pumped back to the Concentrate Filter Plant to be reused in the process.	4.83
D23	Concentrator Runoff Pond (a.k.a. Winns Pond)	This unlined stormwater pond is made up of two (2) sub-basins that are 0.6 and 0.7 acres in size. The basins have total capacities of 1.1 and 1.9 acre-feet. Concentrator Runoff Pond is constructed on old tailings from the Kennecott operations. This pond prevents water from flowing through crusher operations during a storm event. The sampling and analysis portions of the closure plan dated July 25, 2014, supplemented by submittals on February 13, 2015 and March 30, 2016, are approved for implementation. A revised closure design including erosion control and capping was submitted on October 26, 2018.	0.83

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
D28.5	Smelter Lined Impoundment	<p>The Smelter Lined Impoundment, also referred to as the Calcium Sulfate Pond or Mist Precipitator Sludge Pond, is approximately 10 acres in area and was constructed in 1983. It operated until about 1990 and is no longer in service. The impoundment contains calcium sulfate (CaSO<sub>4</sub>) solids from the distillation process at the water treatment plant (Facility D28). The impoundment is lined with synthetic rubberized asphalt. It is located within a natural drainage, and was created by an earthen embankment called the “82 Dam”. The embankment has a crest width of 20 feet and 3:1 upstream and downstream slopes.</p> <p>This lined impoundment shall be closed in place and capped. The characterization of materials to remain in place has been completed. Characterization of materials used for the cap shall include a minimum of three samples to confirm the material is clean fill. Design of the cap was submitted on October 26, 2018.</p>	50.4
D28.7	Smelter Main Gate Impoundment	<p>The Smelter Main Gate Impoundment (SMGI), a non-stormwater pond, is part of a site-wide system that is designed to control stormwater runoff at the Hayden Operations. The SMGI receives runoff from areas of Hayden Watershed 6 that contains the Concentrate Storage Bins, Clean-out Pad, and Smelter Main Gate area. The SMGI is constructed using a single 60-mil High Density Polyethylene (HDPE) geomembrane liner over an engineered compacted sub-base. The SMGI has a total volume of 5.49 acre-feet (1,788,924 gallons); approximately 8-feet deep; internal side-slopes of no less than 3H:1V; and has sufficient capacity to retain the 100-year 24-hour storm event while maintaining 2-feet of freeboard.</p>	4
D34	CP-1	<p>CP-1 is a lined non-stormwater pond having an area of 1.6 acres and a total capacity of approximately 14.9 acre feet. BADCT was upgraded when a liner (60-mil HDPE) was installed in late 1996 and early 1997. This pond was installed over a former pond referred to as Louie’s Lagoon/Pond. CP-1 receives overflow from a concrete-lined sump located on the south side of the impoundment. Solutions flowing into the sump (which may in turn overflow to CP-1 if flow is sufficient) include stormwater and solutions from facilities in the smelter area including truck wash water, treated effluent from 3 sewage treatment plants, and cooling tower blowdown (two cooling towers at the acid plant, one at the anode plant, and one at the</p>	13

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
		<p>oxygen plant). Water that overflows from the sump to CP-1 is pumped back to the sump when water levels in the sump decline. From the sump the water is pumped to the concentrator as process water makeup. CP-1 is also designed to receive excess stormwater from a stormwater run-on pond located on the north side of CP-1.</p> <p>BADCT has been demonstrated for this facility. Current construction is consistent with prescriptive BADCT for non-stormwater impoundments. Flow meters have been installed to monitor inflow and outflow.</p>	
D39	East Ponds (west)	Two unlined stormwater ponds called the East Ponds have a total area of approximately 2.4 acres. The ponds are east of the ASARCO slag pile. BADCT demonstration showed that no upgrades are warranted after considering cost vs. discharge reduction.	4.5
D39	East Ponds (east)	see above	6.2
D39.1	South Ponds	Two unlined South Ponds are designed to collect stormwater that runs off the ASARCO slag pile. Virtually all of the area of the northernmost South Pond has been covered by slag. These ponds have an approximate total area of approximately 0.7 acres. Based on the characterization of slag, a BADCT demonstration showed that no upgrades are warranted after considering cost vs. discharge reduction.	4.7

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
D42.1	Water Reclamation Ponds (includes Contingency Ponds)	<p>The Water Reclamation Ponds are located at the southeast end of the AB-BC tailings impoundment and consist of two rectangular-shaped ponds, having a total area of 7.2 acres. Two additional ponds to the east are called the Contingency Ponds, which are inactive. The Water Reclamation ponds were constructed with a 10 mil PVC liner overlain by a clay liner. The ponds currently contain an abundance of cattails and other vegetation. Each pond has a contingency pond for overflow but the pipe to link the reclamation ponds to the contingency ponds has not been installed, so the contingency ponds are inactive. There are two sources of water in these reclamation ponds: decant water from the AB-BC and D tailings impoundments and fresh (potable) make-up water from PZ Ranch (located several miles away). Water is pumped from the water reclamation ponds to storage tanks (facility D9) and to the Powerhouse and Secondary Pump Reservoir (D19) for reuse in the process.</p> <p>Solution characterization did not identify any AWQS exceedances. BADCT for this facility includes: (1) installing the reinforced concrete pipe that is shown on the design drawings in order to link the Water Reclamation Ponds to the Contingency Ponds to provide additional capacity, (2) repairing the existing liner as needed, and (3) using operational controls to prevent the overtopping during outages.</p>	
D8	Concentrator Solid Waste Landfill	<p>The Concentrator 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).</p> <p>One cell of this landfill was listed as the Solid Waste Landfill (D8.3) in a previous version of this aquifer protection permit. However, ASARCO indicated in their March 2010 amendment application that this portion of the landfill is used only for asbestos and meets the definition of inert material, therefore this cell is exempt from aquifer protection permit requirements and has not been included as a discharging facility.</p>	N/A

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
D32	Smelter Landfill	The Smelter 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).	N/A
D3.2	Concentrate Storage Area (closed in place)	<p>Concentrate is the product created by the flotation process. The Concentrate Storage Area was a temporary staging area for concentrate where concentrate was stored on the bare ground in stockpiles. There were no structures such as storage bins or concrete pads in this area. Use of this area has been discontinued and the facility has been replaced by a concrete pad designed to meet the APP tank exemption.</p> <p>Soil at the storage area was sampled and characterized. Concentrations of metals with Aquifer Water Quality Standards were below Groundwater Protection Levels. Copper was detected in soil at concentrations up to 153,00 mg/kg. In the absence of a regulatory concentration limit to demonstrate clean closure, the area is closed with documented copper concentrations remaining in-place. The closure design includes grading the ground surface to limit ponding and provide positive drainage of storm water from the closed facility. Stormwater will drain to a service road to the southwest and ultimately to the Last Chance Pond.</p>	N/A
D25.2	Petroleum Coke Storage Area (closed in place)	<p>Petroleum coke is a reagent used in the smelting process. The prior practice was to stockpile petroleum coke at this location on bare ground. Use of this facility has been discontinued and the coke is now stored in an existing concrete bunker which meets the APP tank exemption.</p> <p>The soil below the storage area was sampled and characterized. Concentrations of metals with Aquifer Water Quality Standards were below Groundwater Protection Levels. Copper was detected in soil at concentrations up to 38,300 mg/kg. In the absence of a regulatory concentration limit to demonstrate clean closure, the area is closed with documented copper concentrations remaining in-place. The closure design includes grading the ground surface to limit ponding and provide positive drainage of storm water off from the closed facility. Stormwater will drain to a service road to the south.</p>	N/A

Table 9: PERMITTED FACILITIES AND BADCT			
Facility ID	Facility Name	BADCT	Capacity with 2 feet freeboard (acre-feet)
D19.1A	Truck Wash Facility	This truck wash is located on the concentrator side of the Hayden Operations. The facility consists of a concrete pad that was originally a basin for the Powerhouse Cooling Tower, which was removed. A concrete-lined trench drain in the center of the wash pad routes wash water to the Powerhouse and Secondary Pump Reservoir (D19), to be recycled back into the process. There is no runoff from the concrete pad. The ingress and egress of the truck wash are paved to reduce infiltration of “drive-off” water. No upgrades are planned.	N/A
D21.1	Concentrator Wash Rack	The wash rack is used primarily by the truck shop staff. A high pressure washer that can be used as steam cleaner is used for cleaning various pieces of equipment. The area is paved with concrete. Wash water drains to a grated concrete-lined sump. From the sump, water is directed to a lined impoundment, and is eventually returned to the flotation or milling process for recycling/reclamation. No upgrades are planned.	N/A
D30.6	Smelter Truck Wash	This truck wash consists of a concrete pad that drains to a sump with an oil-water separator. The water is routed from the separator to CP-1 and then to the concentrator. BADCT for the facility includes maintaining the concrete containment, water conservation through recycling, and annual cleanout and inspection of sump. No upgrades are planned.	N/A

4.2. COMPLIANCE AND OPERATIONAL MONITORING

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Facility ID	Facility Name	Inspection	Performance Level
D42	AB-BC Tailings Impoundment	<p><b>Daily:</b> The facility operator shall visually inspect for seeps or other indications of slope instability, and complete daily inspection reports. If present, consult a geotechnical engineer to evaluate the condition of the facility.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Observing the facility for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability.</li> <li>• Each abnormal condition will be evaluated as soon as practicable by the Tailings Supervisor and the General Operations Supervisor and reported to the EOR,</li> </ul>	<p>Freeboard: 4 feet Beach: 300 feet</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability</p>
		<p><b>Monthly:</b> The facility operator shall complete monthly inspection reports which will be focused on current operational challenges at the facility.</p> <p><u>Tasks include:</u></p> <ul style="list-style-type: none"> <li>• Reviewing geotechnical instrumentation data for the piezometers and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan “ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> <li>• Review action items from the previous monthly inspection.</li> <li>• Inspect the tailings delivery line, seepage collection, decant pond, embankment, and channels.</li> <li>• Assess deposition areas and operational freeboard conditions.</li> <li>• Visit problematic areas reported by operational personnel.</li> </ul>	<p>Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.</p>
		<p><b>Quarterly:</b> Download daily pore pressure measurements obtained from all piezometer stations located on the AB-BC impoundment dams and evaluate the data to determine whether there is a pressure change of greater than 5 psi during the preceding 12 month period. If there is a change of 5 psi or greater, consult a geotechnical engineer to evaluate the condition of the facility.</p>	<p>Change of 5 psi or greater</p>

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING

The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

Facility ID	Facility Name	Inspection	Performance Level
		<p><b>Quarterly:</b> An Engineer of Record (EOR) shall visually inspect the physical condition of the TSF and also inspect for seeps or other indications of slope instability. If present, consult a geotechnical engineer to evaluate the condition of the facility. Information collected, and observations made during each quarterly monitoring/inspection visit shall be presented on a summary report.</p> <p><u>Tasks include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan “ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> <li>• Observing large portions of the dam for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions.</li> </ul>	<p>Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions</p>
		<p><b>Annually:</b> Annual inspections shall be completed by the EOR with the participation of the Responsible Tailings Facility Person and the Regional Geotechnical Manager. The purpose of these inspections is to observe and assess the physical condition of the TSF. An annual report prepared, signed and sealed by the EOR, shall present a summary, interpretation and evaluation of the collected inspection and monitoring data. The annual report shall be submitted to ADEQ.</p> <p><u>Tasks include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Walking and observing TSF major components, including the main dams, secondary dams, benches, checking dams, groins, toe, buttress (once constructed), seepage collection ponds, deposition points, and portions of the tailings delivery lines.</li> <li>• Collecting photos of the components observed.</li> <li>• Preparing a list of recommendations if any and present to site management personnel.</li> </ul>	<p>Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.</p>



Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Facility ID	Facility Name	Inspection	Performance Level
	Emergency Pump Back Ponds/Hillman Ponds	<b>Quarterly (while under operation):</b> After 1” stormwater events, visually inspect for sedimentation levels. Remove excessive sedimentation if observed.	Excessive sedimentation levels
		<b>Semi-Annually (while not under operation):</b> After 1” stormwater events, visually inspect for sedimentation levels. Remove excessive sedimentation if observed.	
	Emergency Channel	<b>Quarterly (while under operation):</b> After 1” stormwater events, visually inspect to ensure it remains clean from debris and the channel banks are not damaged by flows at the following intervals.	Excessive debris or damage to channel banks
		<b>Semi-Annually (while not under operation):</b> After 1” stormwater events, visually inspect to ensure it remains clean from debris and the channel banks are not damaged by flows at the following intervals.	
D42.1	Water Reclamation Ponds (including Contingency Ponds)	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet
		<b>Annually:</b> Vegetation and sediment will be removed as needed to maintain capacity and freeboard. Any soils that are removed will be characterized prior to selection of a disposal site.	NA
D42.2	Tailings Last Chance Basin	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet
		<b>Annually:</b> Vegetation and sediment will be removed as needed to maintain capacity and freeboard. Any soils that are removed will be characterized prior to selection of a disposal site. <b>Note:</b> per the compliance schedule, this section shall be revised to reflect the upgraded design.	NA
E1	D Tailings Impoundment	<b>Daily:</b> The facility operator shall visually inspect for seeps or other indications of slope instability. If present, consult a geotechnical engineer to evaluate the condition of the facility	Freeboard: 4 feet Seeps or indication of slope instability present
		<b>Quarterly:</b> Download daily pore pressure measurements obtained from all piezometer stations located on the D impoundment dams and evaluate the data to determine whether there is a pressure change of greater than 5 psi during the	Change of 5 psi or greater

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING

The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.

Facility ID	Facility Name	Inspection	Performance Level
		preceding 12 month period. If there is a change of 5 psi or greater, consult a geotechnical engineer to evaluate the condition of the facility.	
		<b>Quarterly:</b> An engineer or person familiar with tailings impoundment operation shall visually inspect for seeps or other indications of slope instability. If present, consult a geotechnical engineer to evaluate the condition of the facility	Seeps or indication of slope instability present
		<b>Two times per year:</b> A geotechnical engineer shall conduct a visual inspection, preceded by a review of the previous piezometer measurements. The geotechnical engineer shall evaluate whether the monitoring frequency is adequate considering an evaluation of the operating practices and other factors that could potentially impact stability of the dams.	NA
E2	D Tailings Maintenance Pond	<p><b>After drain-down events,</b> Asarco shall inspect the pond to verify that only tailing is entering the impoundment and that freeboard is maintained. Asarco shall:</p> <ul style="list-style-type: none"> <li>• Allow a 3 to 4-week solar drying period for deposited materials to solidify prior to clean out.</li> <li>• Remove excess sediments/tailings deposition from the impoundment to maintain at least 80% of the design capacity.</li> <li>• During sediment/tailings removal, avoid excavation below the 10 to 12-inch decomposed granite indicator layer to ensure that the compacted tailings liner remains in-tact. Place additional decomposed granite and compact mechanically to reinforce the indicator layer as-needed.</li> <li>• If the compacted tailings liner is disturbed, then restore liner to 6-inches of fine tailings material compacted to 95% maximum dry density (Standard Proctor; ASTM Method D-698) within 3% of the optimum moisture content, to be tested and approved by qualified outside engineer.</li> </ul> <p><b>Monthly:</b> Visually inspect and maintain a minimum of 2-feet of freeboard in impoundment, visually inspect and take appropriate action if evidence of impairment of embankment integrity or impairment of access.</p>	Freeboard: 2 feet
D42.3	Emergency Pump-back Ponds	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Facility ID	Facility Name	Inspection	Performance Level
		<b>Annually:</b> Vegetation and sediment will be removed as needed to maintain capacity and freeboard. Any soils that are removed will be characterized prior to selection of a disposal site.	NA
D39.1	South Ponds	<b>Annually:</b> Vegetation and sediment will be removed as needed to maintain capacity and freeboard. Any soils that are removed will be characterized prior to selection of a disposal site.	Freeboard: 2 feet
D39	East Ponds	<b>Annually:</b> Vegetation and sediment will be removed as needed to maintain capacity and freeboard. Any soils that are removed will be characterized prior to selection of a disposal site.	Freeboard: 2 feet
D1	Smelter Last Chance Pond	<b>Quarterly:</b> Liner inspection.	Tears, punctures, whales, anchor trench damage
		<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet
None	Decant Pond	<b>Quarterly:</b> Liner inspection.	Tears, punctures, whales, anchor trench damage
		<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet
D28.5	Smelter Lined Impoundment	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.  Note: per the compliance schedule, this facility will be closed, and this section shall be revised to reflect the closure inspection requirements	Freeboard: 2 feet
D28.7	Smelter Main Gate Impoundment	<b>Quarterly:</b> Liner inspection.	Tears, punctures, whales, anchor trench damage
		<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Facility ID	Facility Name	Inspection	Performance Level
		<b>Annually:</b> Sediment will be removed as needed to maintain capacity and freeboard. Any sediments that are removed will be characterized prior to selection of a disposal site.	NA
D34	CP-1	<b>Monthly:</b> Inflow/outflow will be monitored.	NA
		<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify pond integrity and that freeboard is maintained.	Freeboard: 2 feet
		<b>Quarterly:</b> Liner inspection.	Tears, punctures, whales, anchor trench damage
		<b>Annually:</b> Sediments will be cleaned out from CP-1 and the sump annually to maintain capacity. Any sediments that are removed will be characterized prior to selection of a disposal site.	NA
D19.1A	Truck Wash Facility	<b>Annually:</b> Sump will be cleaned out and inspected.  Inspections according to the Appendix C inspection guidance document (in the 8/3/12 submittal to ADEQ) and documented in a log book. Repairs, if needed, will be made in accordance with Section 4 of EPA's technical Guidance Document "Determining the Integrity of Concrete Sumps" and described in the log book.	NA
D21.1	Concentrator Wash Rack	<b>Annually:</b> Sump will be cleaned out and inspected.  Inspections according to the Appendix C inspection guidance document (in the 8/3/12 submittal to ADEQ) and documented in a log book. Repairs, if needed, will be made in accordance with Section 4 of EPA's technical Guidance Document "Determining the Integrity of Concrete Sumps" and described in the log book.	NA
D30.6	Smelter Truck Wash	<b>Annually:</b> The sump will be cleaned out and inspected.  Inspections according to the Appendix C inspection guidance document (in the 8/3/12 submittal to ADEQ) and documented in a log book. Repairs , if needed, will be made in accordance with Section 4 of EPA's technical Guidance Document "Determining the Integrity of Concrete Sumps" and described in the log book	NA

Table 10: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Facility ID	Facility Name	Inspection	Performance Level
D3.2	Concentrate Storage Area (closed in place)	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify that ponding does not occur	No ponding of stormwater
D25.2	Petroleum Coke Storage Area (closed in place)	<b>Following Storm Events:</b> Inspections shall be conducted following each storm event of one (1) inch or more of precipitation to verify that ponding does not occur	No ponding of stormwater

Table 11: FACILITY INSPECTION AND NON-OPERATIONAL MONITORING

Facility ID	Facility Name	Inspection	Performance Level
D42	AB-BC Tailings Impoundment	<p><b>Quarterly:</b> Quarterly inspections shall be completed by the EOR. The purpose of the inspections is to observe and assess the physical condition of the TSF. Information collected, and observations made during each quarterly monitoring/inspection visit shall be presented on a summary report.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan for the TSF (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> <li>• Observing large portions of the dam for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions.</li> </ul>	<p>Freeboard: 4 feet Beach: 300 feet</p> <p>Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability</p>
		<p><b>Annually:</b> Annual inspections shall be completed by the EOR with the participation of the Responsible Tailings Facility Person and the Regional Geotechnical Manager. The purpose of these inspections is to observe and assess the physical condition of the TSF. An annual report prepared, signed and sealed by the EOR, shall present a summary, interpretation and evaluation of the collected inspection and monitoring data. The annual report shall be submitted to ADEQ.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Walking and observing TSF major components, including the main dams, secondary dams, benches, checking dams, groins, toe, buttress (once constructed), seepage collection ponds, deposition points, and portions of the tailings delivery lines.</li> <li>• Collecting photos of the components observed.</li> <li>• Preparing a list of recommendations if any and present to site management personnel.</li> </ul>	NA

Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION

Facility ID	Facility Name	Inspection	Performance Level
D42	AB-BC Tailings Impoundment	<p><b>Daily:</b> The facility geotechnical instrumentation data shall be reviewed by the EOR.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020).</li> </ul>	Non-compliance with the response levels for the geotechnical instrumentation for the various phases of the tailings facility as specified in the Instrumentation and Monitoring Plan.
		<p><b>Weekly:</b> The facility operator shall complete weekly inspection reports. The weekly inspection reports will relate to his/her respective facility, area, and/or equipment.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Observing the facility for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability.</li> <li>• Each abnormal condition will be evaluated as soon as practicable by site management and reported to the EOR.</li> </ul>	<p>Freeboard: 4 feet Beach: 300 feet</p> <p>Signs of seepage, cracking, sinkholes, sand boils, bulging, and any other abnormal conditions that could impact TSF stability</p>
		<p><b>Monthly:</b> The facility operator and EOR will complete monthly inspections. The purpose of the monthly inspection is to observe and assess buttress construction activities.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Review action items from the previous monthly inspection.</li> <li>• Inspect the tailings delivery line, seepage collection, decant pond, embankment, and channels.</li> <li>• Assess deposition areas and operational freeboard conditions.</li> <li>• Visit problematic areas reported by operational personnel.</li> </ul>	NA
		<p><b>Quarterly:</b> Quarterly inspections will be completed by the EOR. The purpose of the inspections is to observe and assess the physical condition of the TSF. Information collected, and observations made during each quarterly monitoring/inspection visit are presented on a summary report.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> </ul>	NA

Table 12: FACILITY INSPECTION AND MONITORING DURING BUTTRESS CONSTRUCTION

Facility ID	Facility Name	Inspection	Performance Level
		<ul style="list-style-type: none"> <li>• Reviewing geotechnical instrumentation data for the piezometers, survey prisms, and inclinometers at the frequencies proposed in the Instrumentation and Monitoring Plan for the TSF (“ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1”, prepared by Wood, dated September 25, 2020.</li> <li>• Observing large portions of the dam for signs of seepage, cracking, sinkholes, sand boils, bulging, and any other unusual conditions.</li> </ul>	
		<p><b>Annually:</b> Annual inspections will be completed by the EOR with the participation of the Responsible Tailings Facility Person and the Regional Geotechnical Manager. The purpose of these inspections is to observe and assess the physical condition of the TSF. An annual report prepared, signed and sealed by the EOR, will present a summary, interpretation and evaluation of the collected inspection and monitoring data. The annual report will be submitted to ADEQ.</p> <p><u>Tasks Include:</u></p> <ul style="list-style-type: none"> <li>• Consulting with site tailings personnel, reviewing the previous action items, and discussing current issues if any.</li> <li>• Walking and observing TSF major components, including the main dams, secondary dams, benches, checking dams, groins, toe, buttress (once constructed), seepage collection ponds, deposition points, and portions of the tailings delivery lines.</li> <li>• Collecting photos of the components observed.</li> <li>• Preparing a list of recommendations if any and present to site management personnel.</li> </ul>	



Table 13: QUARTERLY COMPLIANCE GROUNDWATER MONITORING												
Parameter <sup>4 5</sup>	H-1R		H-3		H-5		H-6		H-8		MW-2B	
	AQL <sup>6</sup>	AL <sup>7</sup>	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL
Depth to Water(in feet bgs)	Monitor <sup>8</sup>	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Water Level Elevation (in feet amsl)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Specific Conductance (µmhos/cm) – Field	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Temperature (°F)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Field pH (S.U.)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Total Dissolved Solids	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Sulfate	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Nitrate+Nitrite (as N)	10	8	10	8	10	8	10	8	10	8	10	8
Fluoride	4.0	3.2	6.1	None	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Arsenic	0.050	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.050	0.04	0.050	0.04
Copper	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Selenium	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.184	None	0.05	0.04

<sup>4</sup> All concentrations are in milligrams per liter (mg/L) unless otherwise specified.

<sup>5</sup> Metals shall be analyzed as dissolved metals.

<sup>6</sup> AQL = Aquifer Quality Limit

<sup>7</sup> AL = Alert Level

<sup>8</sup> Monitor = Monitoring required, but no limit established in the permit.

Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING

Parameter <sup>9 10</sup>	H-1R		H-3		H-5		H-6		H-8		MW-2B	
	AQL <sup>11</sup>	AL <sup>12</sup>	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL
Total Alkalinity	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Carbonate	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Bicarbonate	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Chloride	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Calcium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Magnesium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Potassium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Sodium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Iron	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Antimony	0.006	0.0048	0.006	0.0048	0.006	0.0048	0.006	0.0048	0.006	0.0048	0.006	0.0048
Barium	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2	1.6
Beryllium	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032
Cadmium	0.005	0.004	0.005	0.0032	0.005	0.004	0.004	0.005	0.005	0.004	0.005	0.004
Chromium	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08
Lead	0.050	0.040	0.050	0.040	0.050	0.040	0.050	0.040	0.050	0.040	0.05	0.040
Manganese	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Mercury	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08

<sup>9</sup> Metals shall be analyzed as dissolved metals.

<sup>10</sup> All concentrations are in milligrams per liter (mg/L) unless otherwise specified.

<sup>11</sup> AQL = Aquifer Quality Limit

<sup>12</sup> AL = Alert Level

Table 14: BIENNIAL COMPLIANCE GROUNDWATER MONITORING

Parameter <sup>9 10</sup>	H-1R		H-3		H-5		H-6		H-8		MW-2B	
	AQL <sup>11</sup>	AL <sup>12</sup>	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL
Thallium	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Zinc	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Gross Alpha Particle Activity (pCi/L) <sup>13</sup>	15	12	15	12	15	12	15	12	15	12	16.8	No AL; AQL set above AWQS
Radium 226 + Radium 228 (pCi/L)	5	4	15	12	15	12	15	12	15	12	5	4
Uranium (mg/L)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Benzene	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	Res.	Res.	0.005	0.004
Toluene	1	0.4	1	0.4	1	0.4	1	0.4	Res.	Res.	1	0.4
Ethylbenzene	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	Res.	Res.	0.7	0.56
Xylene	10	8	10	8	10	8	10	8	Res.	Res.	10	8

<sup>13</sup> If gross alpha particle activity is greater than the AL (12 pCi/L) or the AQL (15 pCi/L), then test for and report adjusted gross alpha particle activity in accordance with Sections 2.6.2.3.2 or 2.6.4. If the adjusted gross alpha exceeds the AQL or AL, a permit exceedance has occurred and the contingency actions required by Sections 2.6.2.3.2 or 2.6.4 shall be followed. The adjusted gross alpha particle activity is the gross alpha activity, including radium 226, minus radon and uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes) reported in pCi/L.

**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: August 17, 2020
- Contingency Plan, dated: December 2019
- Final Hydrologist Report, dated: Not applicable
- Final Engineering Report, dated: January 19, 2021
- Public Notice, dated: **Insert date or Not applicable**
- Public Hearing, dated: **Insert date or Not applicable**
- Responsiveness Summary, dated: **Insert date or Not applicable**

**Documents Reviewed:**

1. Letter from Amy Veek, Asarco, to Maribeth Greenslade, ADEQ, dated August 14, 2020, regarding AB-BC Tailings Stability Analysis and Project Update for ASARCO LLC-Hayden Operations' Aquifer Protection Permit (APP) No. P-100507
2. APP Application Form and Certificate of Disclosure
3. **Attachment 1** – Technical Memorandum: Stability Analysis for Buttress Width Optimizations AB-BC Tailings Storage Facility, ASARCO Hayden Operations, Hayden Arizona, prepared by Wood Environment and Infrastructure Solutions, Inc. (hereafter Wood), dated August 4, 2020, signed and sealed by Ardeshir Sharifabadi, P.E. (Civil) and Tony J. Freiman, P.E. (Civil).
4. **Attachment 2** – Technical Memorandum: Seismic Stability Analysis for AB-BC Tailings Storage Facility, Hayden Arizona, prepared by Wood, dated August 5, 2020, signed and sealed by Tony J. Freiman, P.E. (Civil)
5. **Attachment 3** – Technical Memorandum: ASARCO Hayden AB-BC Buttress, Hydrologic Routing through Emergency Ponds, AB Downdrains and BC Rill Erosion Repairs, dated August 14, 2020, and revised October 14, 2020, signed and sealed by Robert Davies, P.E. (Civil)
6. **Attachment 4** – Technical Memorandum: AB-BC Tailings Storage Facility, ASARCO Hayden Operations, Hayden, Arizona, prepared by Wood, dated December 17, 2020, signed and sealed by Tony J. Freiman, P.E. (Civil)
7. **CSI No. 6** – AB/BC Tailings Buttress Detailed Engineering Submittal for ASARCO LLC - Hayden Operations' Aquifer Protection Permit (APP) No. P-100507 LTF 79697, dated November 11, 2020, and received by ADEQ on November 16, 2020. The documents were prepared by Wood, signed and sealed by Tony Freiman, P.E. (Civil)
8. **CSI No. 7** – ASARCO, LLC Hayden Operations AB-BC Tailings Storage Facility Instrumentation and Monitoring Plan Revision 1, prepared by Wood, dated September 25, 2020, signed and sealed by Naida Causevic Wallstrom, P.E. (Civil) and Tony Freiman, P.E. (Civil)
9. AB-BC TSF Buttress Project Schedule (1 page)

The following document previously submitted was also reviewed:

1. Technical Memorandum: Stability Analysis and Remedial Measures, AB-BC Tailings Storage Facility, ASARCO Hayden Operations, Hayden, Arizona, prepared by Wood, dated December 17, 2019, signed and sealed by Naida Causevic Wallstrom, P.E. (Civil) and Tony Freiman, P.E. (Civil)

## **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).