STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P- 511395
PLACE ID 145089, LTF 58513

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3 and Chapter 4 Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A. A. C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, ASARCO LLC is hereby authorized to operate the ASARCO Ripsey Wash Tailings Storage Facility located in eastern Pinal County, adjacent to the Florence-Kelvin Highway, approximately five miles west of Kearny in Sections 10-12, 14, 15, 21-23, and 27, Township 4 South, Range 13 East, of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods), unless suspended or revoked pursuant to A.A.C. R18-9-A213. The Permittee shall construct, operate and maintain the permitted facilities:

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

1.1 PERMITTEE INFORMATION

Facility Name:	ASARCO Ripsey Wash Tailings Storage Facility
Facility Address:	4 Miles SW of the Ray Mine Operations adjacent to the Florence-Kelvin Highway Kearny, Arizona Pinal County
Permittee:	ASARCO LLC
Permittee Address:	ASARCO LLC – Ray Operations Box 640 Kearny, AZ 85137
Permitted Flow Rate:	10,000,000 gallons per day (gpd)
Facility Contact:	Environmental Manager
Emergency Phone No.:	520-356-2229
Latitude/Longitude:	33º 04'59" N / 111º 00' 06" W
Legal Description:	Sections 10-12, 14, 15, 21-23, 26 and 27, Township 4 South, Range 13 East of the Gila and Salt River Base Line and Meridian.

1.2 Authorizing Signature

_____

Trevor Baggiore, Director
Water Quality Division
Arizona Department of Environmental Quality
Signed this _____day of _____, 2016

THIS AMENDMENT SUPERSEDES ANY PREVIOUS PERMITS

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)]

ASARCO LLC shall construct and operate the ASARCO Ripsey Wash Tailings Storage Facility (TSF) located in eastern Pinal County, along the Florence-Kelvin Highway, approximately five miles west of the Town of Kearny. The Ripsey TSF (R1) shall receive tailings generated from the Ray Operations, located approximately four miles northeast of the facility. The Ray Operations has been in operation since 1911 and operates 24 hours a day, seven days a week. The TSF shall receive approximately 30,000 tons per day (tpd) (with peak production capacity at 45,000 tpd) for a total capacity of approximately 750 million tons generated from the Ray Operations. The facility shall consists of a tailings storage facility (R1), two reclaim impoundments, and a drain down impoundment. Tailings from the Ray Operations shall be piped in slurry form through tailing pipelines to the TSF. Reclaim water shall be pumped back to the Ray Operations for reuse.

The Main and East Reclaim Impoundments are considered non-stormwater impoundments. The impoundments shall receive and store tailing seepage water and run-off from the tailing side slopes, which is piped back to the thickener at the Ray Operations for reuse. The Main Reclaim Impoundment (R2) is located in Ripsey Wash. This pond stores fluid from the cyclone sand underflow; seepage from the TSF underdrain system; storm water that has contacted the TSF embankment; water recovered from the alluvial seepage collection trench downstream of the TSF; and, if needed, supernatant reclaim water from the tailings impoundment. The East Reclaim Impoundment (R3) is located in an unnamed wash referred to as the East Drainage. This impoundment stores seepage from the TSF underdrain system associated with the eastern portion of the TSF; storm water that has contacted the TSF embankment ; water recovered from the alluvial East Cutoff Wall seepage collection system; and, if needed, supernatant reclaim water. Accumulated fluids in both the Main and East Reclaim Impoundments will be pumped back to the Ray Operations for reuse.

The Drain Down Impoundment (R4) (also considered a non-stormwater impoundment) is located northeast of the TSF on the north side of the Gila River at the lowest elevation of the tailing slurry and the reclaim pipeline profile. This impoundment is designed to temporarily hold tailings and/or reclaim water if the pipelines need to be drained for maintenance (or in the event of a pipeline release), as well as direct precipitation falling onto the impoundment . The water contained in this impoundment is transferred back to the TSF or to the thickener at the Ray Operations.

The site includes the following permitted discharging facilities:

Facility No.	Facility Name	Latitude (North)	Longitude (West)	Acre feet volume	Depth (feet)
R1	Ripsey Wash Tailings Storage Facility (TSF)	33° 04' 35"	110° 59' 55"	Not Applicable	Not Applicable
R2	Main Reclaim Impoundment	33° 05' 51"	111° 00' 26"	119.69	24.5
R3	East Reclaim Impoundment	33° 05' 44"	110° 59' 01"	23.63	16.5
R4	Drain Down Impoundment	33° 04' 35"	110° 59' 55"	21.11	15.5

Annual Registration Fee [A.R.S. § 49-242]
The Annual Registration Fee for this permit is established by A.R.S. § 49-242 and is payable to ADEQ each year. The design flow is 10,000,000 gallons per day. If the facility is not yet constructed or is incapable of discharge at this time, the permittee may be eligible for reduced fees under the rule. Send all correspondence requesting reduced fees to the Water Quality Division of ADEQ. Please reference the permit number, LTF number and why reduced fees are requested under the rule.

Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]
The Permittee shall be required to demonstrate financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The Permittee shall be required to maintain financial capability throughout the life of the facility. The closure and post-closure costs have been estimated at $16,228,443.00. The financial assurance mechanism shall be demonstrated through A.A.C. R18-9-A203(C)(1). Updated closure costs, post-closure

costs and the associated financial assurance mechanism shall be provided per the Compliance Schedule, Sections 3.6 and 3.7.

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

The Ripsey TSF shall employ individual BADCT components and the three surface impoundments will employ prescriptive BADCT components (in accordance with the Arizona Mining BADCT Guidance Manual (AMBGM)). BADCT has been determined in accordance with the AMBGM. Although considered non-stormwater impoundments pursuant to the AMBGM, the design of the three ponds incorporates enhanced discharge control measures (such as double liners and leak collection and recovery systems) that go beyond the prescriptive components identified in the AMBGM for non-stormwater impoundments.

2.2.1 Engineering design for BADCT

2.2.1.1 Ripsey Wash Tailings Storage Facility (R1) (Tailings Impoundment)

Facility R1, the Ripsey Wash TSF, will be constructed using the centerline dam construction method via two engineered soil and rockfill embankment starter dams and will be constructed, operated and monitored as described in the April 24, 2014 AMEC Technical Design Memorandum (AMEC April 24, 2014 Tech Memo) and subsequent correspondence and technical memorandums submitted during the application process. The TSF will have a deposition rate up to 45,000 tons per day (tpd) by dry weight and have a total capacity of 750 million tons. The maximum permitted dam crest elevation shall be no greater than 2,200 feet above mean sea level (amsl) based on the stability analyses completed by AMEC (April 24, 2014). The TSF will be partially lined with underdrains constructed beneath the two starter dams. Seepage from the underdrains will be collected in the Main and East Reclaim Impoundments. Seepage collection systems will be constructed within Ripsey Wash and the East Drainage downstream of the Ripsey TSF to intercept flows within the alluvium of Ripsey Wash and East Drainage, respectively. The downstream side of the seepage collection trench in Ripsey Wash will be lined with a geomembrane that is anchored into bedrock. The cutoff wall within the East Drainage will extend into bedrock. Water that is collected in the seepage collection systems will be pumped out and stored in the reclaim impoundments. Geosynthetic liner will be used for control of potential discharge in the Hackberry fault as described in the AMEC April 24, 2014 Tech Memo.

An upstream diversion dam will be constructed across Ripsey Wash at the south (upgradient) end of the ultimate TSF footprint. Storm water from the upstream watershed will be routed around the TSF via a storm water diversion channel on the east side of the TSF and a series of detention ponds, pump stations, and pipes on the west side of the TSF.

2.1.1.2 Main Reclaim Impoundment (R2) (Non-Stormwater Impoundment)

Facility R2, the Main Reclaim Pond, will be constructed with a 80 mil HDPE overlying 60 mil HDPE double-liner located in the main drainage downgrade of the Ripsey TSF. The impoundment volume for this facility is 39.0 million gallons (119.69 ac-ft) at its maximum pond height (25 feet). The impoundment shall be used to store fluid from the cyclone sand underflow; seepage from the TSF underdrain system; storm water that has contacted the TSF embankment; water recovered from the alluvial seepage collection trench downstream of the TSF; and, if needed, supernatant reclaim water. Pumps will be used to return water from the impoundment to the Ray Operations. This facility will include a Leachate Collection Recovery System (LCRS). The impoundment shall have sufficient capacity to contain expected normal operating volumes and precipitation associated with a 100-year, 24-hour event while still maintaining a minimum 2 feet of freeboard. Accumulated fluids in the Main Reclaim Impoundment will be pumped back to the Ray Operations for reuse The slopes on the impoundment sides will be 3 horizontal

to 1 vertical. The impoundment meets the definition of a non-stormwater pond, but shall be designed and constructed using the prescriptive BADCT measures identified for process solution impoundments.

2.1.1.3 East Reclaim Impoundment (R3) (Non-Stormwater Impoundment)

Facility R3, the East Reclaim Impoundment, will be constructed with an 80 mil HDPE overlying 60 mil HDPE double liner located in the eastern drainage downgrade of the TSF. The estimated impoundment volume for this facility will be 7.7 million gallons (23.63 ac-ft) at its maximum pond height (16.5 feet). The impoundment will be used to store seepage from the TSF underdrain system associated with the eastern portion of the TSF; storm water that has contacted the TSF embankment; water recovered from the alluvial East Cutoff Wall seepage collection system; and, if needed, supernatant reclaim water. This facility shall include a LCRS. The impoundment shall have sufficient capacity to contain expected normal operating volumes and precipitation associated with a 100-year, 24-hour event while still maintaining a minimum 2 feet of freeboard. Accumulated fluid in the East Reclaim Impoundment will be pumped back to the Ray Operations for reuse The slopes on the impoundment sides will be 3 horizontal to 1 vertical. The impoundment meets the definition of a non-stormwater impoundment, but shall be designed and constructed using the prescriptive BADCT measures identified for process solution impoundments.

2.1.1.4 Drain Down Impoundment (R4) (Non-Stormwater Impoundment)

Facility R4 the Drain Down Impoundment will be constructed with a 80 mil HDPE overlying 60 mil HDPE double liner located north of the Gila River and east of the Florence-Kelvin Highway. The estimated impoundment volume for this facility will be 6.88 million gallons (21.11 acre feet) with a maximum pond height (13.5 ft). This impoundment is designed to temporarily hold tailings and/or reclaim water if the pipelines need to be drained for maintenance (or in the event of a pipeline release), as well as direct precipitation falling onto the impoundment . The water contained in this pond is transferred back to the TSF or to the thickener at the Ray Operations. The impoundment will have sufficient capacity to contain anticipated volumes from a pipeline drain down along with the direct precipitation associated with a 100-year, 24-hour storm event while still maintaining a minimum of 2 feet freeboard. The slopes on the impoundment sides will be 3 horizontal to 1 vertical. This facility will include a LCRS. The impoundment meets the definition of a non-stormwater pond, but shall be designed and constructed using the prescriptive BADCT measures identified for process solution impoundments.

2.2.2 Site-specific Characteristics

The majority of the site is underlain by Precambrian-aged Ruin Granite and the Tertiary-aged San Manuel Formation. Geologic structures in the area of the Ripsey TSF include: the San Manuel Graben, the Hackberry Fault, and the Ripsey Fault. The shallow, low hydraulic conductivity bedrock, listed above, underlies most of the Ripsey TSF and will function as a natural barrier to seepage. The configuration of the Ripsey TSF is designed to utilize the natural drainage patterns to assist in the collection of seepage within the alluvium-filled drainages.

2.2.3 Pre-operational Requirements

The permittee shall submit a signed, dated, and sealed by an Arizona-registered Professional Engineer. The report shall include the results of compaction testing and shall verify that the impoundment and subgrade were constructed in accordance with ADEQ-approved plans and this permit and that seams and welds have passed required testing. The report shall document liner installation QA/QC procedures (including seam/weld testing and electrical testing of the primary conductive liner) and final as-built plans and inspection results for all pollution control components relating to the wastewater discharge and treatment processes per Compliance Schedule in Section 3.1, 3.2, 3.3, and 3.4.

2.2.4 Operational Requirements

At a minimum, permitted facilities shall be inspected for performance levels listed in Section 4.2, Table 4.2.1. Results of these inspections shall be documented and maintained on location for at least 10 years from the date of each inspection, as required by Section 2.7.2 of this permit.

If damage is identified during an inspection that could cause or contribute to a discharge, proper repairs shall be promptly performed and documented as described in Section 2.5.2 and Section 2.7.2.

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

The Permittee shall operate and maintain all permitted facilities listed below to prevent unauthorized discharges as defined in A.R.S. § 49-201(12) that result from failure or bypassing of BADCT discharge control technologies including liner failure1, 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, accidental spills, or other causes. The discharge limitations in this section are not applicable to any discharge caused by precipitation in excess of a single design storm event (a 100-year, 24-hour event) or process overflow during a power outage exceeding 24 hours in duration.

2.3.1 Tailings Storage Facility (R1)

Discharge to the R1 tailings storage facility shall be limited to a maximum deposition of 45,000 tons per day (tpd) by dry weight of tailings from the Ray Operations concentrator and a maximum total capacity of approximately 750 million tons. Total deposition of tailings under this permit shall not cause the ultimate dam crest elevation to exceed an elevation of 2200 feet amsl. If the permittee wishes to deposit a greater quantity of tailings, modify the ultimate height of the dam, or deposit tailings at a greater daily rate, then the permittee shall apply for a permit amendment pursuant to Section 6.9 and Section 3.8 in the Compliance Schedule.

2.3.2 Main Reclaim Impoundment (R2) (Non-Stormwater)

Discharge to the R2 Main Reclaim Impoundment shall be limited to fluid from the cyclone sand underflow; seepage from the TSF underdrain system; storm water that has contacted the tailings embankment; water recovered from the alluvial seepage collection trench downstream of the TSF; and supernatant reclaim water from the TSF.

2.3.3 East Reclaim Impoundment (R3) (Non-Stormwater)

Discharge to the R3 East Reclaim Impoundment shall be limited to fluid from the cyclone sand underflow; seepage from the TSF underdrain system; storm water that has contacted the tailings embankment; water recovered from the alluvial seepage collection trench downstream of the TSF; and supernatant reclaim water from the TSF.

2.3.4 Drain Down Impoundment (R4) (Non-Stormwater)

Discharge to the R4 Drain Down Impoundment shall be limited to the temporary containment of a full pipeline of tailings from the pipelines running between the TSF and the mill at the Ray Operations, along with precipitation falling onto the impoundment.

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

There are six established POC well locations in this permit. Table 2.4.1 lists the POC locations.

Well Number	POC Locations	Latitude (North)	Longitude (West)	ADWR Number
MW-1A (existing)	Located in the Ripsey Wash drainage downgradient (north-northeast) of the planned TSF and the Main Reclaim Impoundments.	33° 05' 54"	111° 00' 29"	55-222616
MW-1B (existing)	Located in the Ripsey Wash drainage downgradient (north-	33° 05' 54"	111° 00' 29"	55-222617

	northeast) of the planned TSF and the Main Reclaim Impoundments.			
MW-2 (existing)	Located downgradient (northeast) of the East Reclaim Impoundment.	33° 05' 47"	110° 58' 54"	55-222618
MW-3 (existing)	Located along the west edge of the planned TSF between Ripsey Wash and Zelleweger Wash.	33° 05' 16"	111° 00' 44 "	55-220885
MW-X (Conceptual)	To be located downgradient from the deepest portion of the lined Drain Down Impoundment and upgradient from the Gila River.	33° 06' 14.15"	110° 58' 25.27 "	Not Applicable
MW-Y (Conceptual)	To be located downgradient (north) of the East Reclaim Impoundment.	33° 05' 49.85"	110° 59' 0.284 "	Not Applicable

Groundwater monitoring is required at POCs MW-1A, MW-1B, MW-2 and MW-3. Monitoring requirements for each Point of Compliance are listed in Section 4.2, Table 4.2.3. MW-Y may be required in response to an Alert Level 2 exceedance at the East Reclaim Impoundment.

The Director may amend this permit to require installation of wells and initiation of groundwater monitoring at the POCs or 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. Monitoring shall commence the first full monitoring period following permit issuance. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

None required by this permit.

2.5.2 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 4.2.1.

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

2.5.3 Groundwater Monitoring and Sampling Protocols

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

As an alternative method for sampling, the Permittee may conduct the sampling using the low-

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

2.5.3.1 Point of Compliance Well Replacement

In the event that one or more of the designated POC wells should become unusable or inaccessible due to damage, or any other event, a replacement POC well shall be constructed and installed upon written approval by ADEQ. If the replacement well is 50 feet or less from the original well, the ALs and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well. Otherwise, the ALs and/or AQLs shall be set following the provisions in Section 2.5.2.3 and Section 2.5.2.4 of this permit.

2.5.3.2 Ambient Groundwater Quality Monitoring for Point of Compliance 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 4.2, Table 4.2.2. After collection of the eight required samples, the permittee shall submit an Ambient Groundwater Monitoring Report pursuant to Section 2.7.4.2 and Section 3.5.

2.5.3.3 Alert Levels (ALs) for Point of Compliance Wells

Following completion of the ambient groundwater quality monitoring, ALs shall be calculated for all parameters identified in Section 4.2, Table 4.2.3 for which a numeric aquifer water quality standard (AWQS) has been adopted, based on the 8 quarterly groundwater samples required in Section 2.5.4 and Section 4.2, Table 4.2.2. To document the ambient sampling program, the permittee shall submit an Ambient Groundwater Monitoring Report to the Water Permits Section per Sections 2.7.4.2 and 3.5.

The ALs shall be established and calculated by the following formula or another valid statistical method submitted to the Water Permits Section.

$AL = M + K\phi$

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

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

1. The AL will be calculated for a parameter using the analysis from a maximum of 8 consecutive quarterly sample rounds. Under certain circumstances, additional rounds of sampling may be requested by the Permittee.
2. Any data where the Practical Quantification Limit (PQL) exceeds 80 percent of the AWQS shall not be included in the AL calculation.
3. If a parameter is below the detection limit, the permittee shall report the value as "less than" the numeric value for the PQL or detection limit for the parameter, not just as "non-detect". For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
4. If the analytical results from more than 50 percent of the samples for a specific parameter are non-detect, then the AL shall be set at 80 percent of the AWQS and the AQL shall be set equal to the AWQS.
5. If the calculated AL for a specific constituent and well is less than 80 percent of the AWQS, then the AL shall be set at 80 percent of the AWQS and the AQL shall be set equal to the AWQS for that constituent in that well.

6. 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 in that well.

2.5.4 Quarterly Compliance Monitoring

Beginning in the quarter prior to construction the permittee shall begin performing quarterly compliance monitoring of the POC wells as specified in Section 4.2, Table 4.2.3. The results of the monitoring shall be compared to the AQLs and ALs established for the POC wells following submission of the Ambient Groundwater Monitoring Report pursuant to Sections 2.7.4.2 and 3.5. If the results indicate an exceedance of an AL or a violation of an AQL, then the permittee shall comply with Section 2.6.2.5 (Exceeding of Alert Levels in Groundwater Monitoring) or Section 2.6.4 (Aquifer Quality Limit Violation), as applicable.

The permittee shall submit reports of the quarterly compliance monitoring in accordance with the reporting schedule at Section 2.7.6.

2.5.5 Surface Water Monitoring and Sampling Protocols

None required by 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 contingency requirements of Section 2.6 and may propose "other actions" including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. **§** 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

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

2.5.7 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 Water Permits Section for approval prior to installation and the permit shall be amended to include any new 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 the approved contingency and emergency response plan(s) submitted in the application on June 20, 2014, 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. The Permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit.

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. Any AL that is exceeded or any

violation of an AQL, discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

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. The Permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the Permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the Permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The Permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

2.6.2 Exceeding of Alert Levels

2.6.2.1 Exceeding of Alert Levels Set for Operational Conditions

1. Performance Levels Set for Freeboard

In the event that freeboard performance levels in a surface impoundment listed in Section 4.2, Table 4.2.1 are not maintained, the permittee shall:

a) Immediately cease or reduce discharging to the impoundment to prevent overtopping. Remove and properly dispose or recycle to other plant processes the excess water in the impoundment until the water level is restored at or below the permitted freeboard limit.

b) Within 5 days of discovery, evaluate the cause of the incident and adjust operational condition as necessary to avoid future occurrences.

c) Record in the facility log, the amount of water removed and a description of the removal method and the disposal arrangements. The facility log shall be maintained according to Section 2.7.2 (Operation Inspection/Log Book/ Recordkeeping). Records documenting each freeboard incident and actions taken to correct the problem shall be included in the Annual Report as Required in Section 2.7.4.1.

d) The facility is no longer on alert status once the operational indicator no longer indicates that the freeboard performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2. Performance Levels, Other Than Freeboard

a) If an operational AL listed in Section 4.2, Table 4.2.1 has been observed or noted during required inspection and operational monitoring, such that the result could cause or contribute to an unauthorized discharge or exceedance of an AL or violation of an AQL, the Permittee shall immediately investigate to determine the cause of the condition. The investigation shall include the following:

i. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the operational performance condition.

ii. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences.

b) The AL exceedance, results of the investigation, and any corrective action taken shall be reported to the Water Quality Compliance Section (WQCS), within 30 days of the discovery of the condition. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.

c) The Permittee shall initiate actions identified in the approved contingency plan referenced in Section 3.0 and any specific contingency measures

identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the Permittee shall obtain prior approval from ADEQ according to Section 2.6.6.

2.6.2.2 Exceeding of Alert Level 1 for Normal Liner Leakage

If the impoundment Alert Level 1 (AL1) has been exceeded, as defined in Section 4.2, Table 4.2.4, the permittee shall take the following actions:

1. Within five (5) days of discovery, determine if the fluids in the LCRS sump are operational water from the impoundment by comparison of the pH and conductivity of fluids in the sump and impoundment. Notify the ADEQ Water Quality Compliance Section in accordance with Section 2.7.3, including in the notification an assessment of the type of fluid in the sump.
2. Within fifteen (15) days of discovery, assess the condition of the impoundment liner system using visual methods, electrical methods or other methods as applicable to determine the location of the leak(s). If liner damage is apparent, the Permittee shall complete liner repairs and submit documentation of the repairs in the Initial Liner Repair Report, as described in Action 3, described below.
3. Within thirty (30) days of discovery, the Permittee shall submit an Initial Liner Repair Report to the Water Quality Compliance Section to address any deficiencies identified from the initial assessment of the impoundment liner system, including the source of the fluids and any remedial actions taken to prevent or minimize future occurrences. The report shall include the results of the liner evaluation, methods used to identify the leak location(s), repair procedures and documentation of the repair construction quality control and quality assurance procedures.
4. For leakage rates that continue to exceed AL1 and are below AL2, a Liner Leakage Assessment Report shall be included in the next annual report required by Section 2.7.4.1. The Permittee may submit the Liner Leakage Assessment Report to ADEQ prior to the annual report. The Liner Leakage Assessment Report shall be submitted to both the Water Quality Compliance Section and the Water Permits Section.

2.6.2.3 Exceeding of Alert Level 2 (Discharge Limit) for Liner Failure

If the impoundment Alert Level 2 (AL2) has been exceeded, as defined in Section 4.2, Table 4.2.4, the Permittee shall take the following actions:

1. Immediately upon discovery, remove fluid level in the impoundment to the extent practical to limit discharge to the impoundment and notify the Water Quality Compliance Section of the AL2 exceedance as soon as practical. Within 24 hours determine if the fluid in the LCRS sump is operational water from the impoundment by comparison of the pH and conductivity of fluids in the sump and impoundment.
2. Within five (5) days of discovery, notify the ADEQ Water Quality Compliance Section, in accordance to the requirements of Section 2.7.3 (Permit Violation and AL Status Reporting), including an assessment of the fluids in the sump described in Action 1, described above.
3. Within fifteen (15) days of discovery, assess the condition of the impoundment liner system using visual methods, electrical methods or other methods as applicable to determine the location of the leak(s). If liner damage is apparent, the Permittee shall complete liner repairs and submit documentation of the repairs in a Liner Repair Report, as described in Action 4, described below. Discharge to the impoundment shall not be re-initiated until the leak(s) has been identified and repaired.
4. Within thirty (30) days of discovery, the Permittee shall submit a Liner Repair Report to the Water Quality Compliance Section, according to the requirements of Section 2.7.3 (Permit Violations and AL Status Reporting) to address the deficiencies identified from the initial assessment of the impoundment liner system, including the source of the fluids and any remedial actions taken to prevent or minimize future occurrences. The report shall include the results of the liner

evaluation, methods used to identify the leak location(s), repair procedures and documentation of the repair construction quality control and quality assurance procedures. Upon review of the Liner Repair Report, ADEQ may request additional monitoring or remedial actions.

5. For leakage rates that continue to exceed AL2 following repairs, the permittee shall, within sixty (60) days of the completion of repairs described in Action 3 above, submit for approval to the ADEQ Water Quality Compliance Section, a corrective action plan, including a schedule to complete the corrective actions to address all problems identified from the assessment of the liner system and any surface releases. Upon approval by ADEQ, the Permittee shall implement the approved corrective action plan in accordance with the schedule of corrective actions.
6. Within thirty (30) days of completion of the corrective actions, the permittee shall submit to the ADEQ Water Quality Compliance Section, a written report as specified in Section 2.6.6 (Corrective Actions).

2.6.2.4 Exceeding of Alert Levels Set for Discharge Monitoring

Not applicable

2.6.2.5 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.5.1 Alert Levels for Indicator Parameters

None required by this permit.

2.6.2.5.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

1. If an AL for a pollutant set in Section 4.2, Table 4.2.3 or 4.2.4 has been exceeded, the Permittee shall request that the laboratory verify the sample results within five (5) days. If the analysis does not confirm that an exceedance has occurred, the Permittee may assume that there is no exceedance and no further action is required under this subsection. If the exceedance is confirmed, the Permittee may conduct verification sampling for that parameter within 5 days of becoming aware of an AL exceedance. The Permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling confirms the AL exceedance or if the Permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring for that parameter to monthly. In addition, the permittee shall immediately initiate an investigation of the cause of the AL exceedance, including inspection of all relevant discharging facilities and 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 from existing wells.
3. 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.
4. The Permittee shall initiate actions identified in the approved contingency plan referenced in Section 3.0 in the application and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. 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 Section, that although an AL is exceeded, pollutants are not reasonably expected to cause a violation of an AQL.

The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Section.

5. Within 30 days after confirmation of an AL being exceeded, the Permittee shall submit the laboratory results to the Water Quality Compliance Section, Data Unit along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.
6. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.
7. The increased monitoring required as a result of ALs being exceeded may be reduced to the regularly scheduled frequency, if the results of three (3) consecutive monthly sampling events demonstrate that no parameters exceed the AL.
8. If the increased monitoring required as a result of an AL exceedance continues for more than six (6) sequential sampling events, the Permittee shall submit a second (2nd) report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth (6th) sampling event.

2.6.2.5.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards
Not applicable

2.6.2.5.4 Alert Level for Groundwater Level
Not applicable

2.6.3 Discharge Limitations Violations

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

In the event of liner failure, containment structure failure, or unexpected loss of fluid resulting in an unauthorized discharge pursuant to A.R.S. § 49-201(12) 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 Water Quality Compliance Section.
3. Within five days of discovery of a failure that resulted in a discharge to the subsurface, collect a representative sample of the fluid remaining in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.3, Table 4.3.1. Within 30 days of the incident, submit a copy of the analytical results to the Water Quality Compliance Section.
4. Within 15 days of discovery, initiate an evaluation to determine the cause for the incident. Identify the circumstances that resulted in the failure and assess the condition of the 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 to normal operating volumes 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 2.7.3.2 (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, conduct 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, 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, 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 or minimize all discharges to the surface impoundment to prevent any further releases to the environment.
2. Within 24-hours of discovery, notify the ADEQ Water Quality Compliance Section.
3. Within five days, collect a representative sample of the fluid contained in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.3, Table 4.3.1**.** Within 30 days of the incident, submit a copy of the analytical results to the Water Quality Compliance Section.
4. As soon as practicable, remove and properly dispose of excess water in the impoundment until the water level is restored at or below the appropriate freeboard as described in Section 4.2, Table 4.2.1. 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 Water Quality Compliance Section.
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 Exceeding of Discharge Limitation for Tailings Deposition Rate

1. If the DL for tailings deposition rate set in Section 4.2, Table 4.2.5 has been exceeded, the permittee shall immediately investigate to determine the cause of the DL being exceeded. The investigation shall include a review of recent process logs, reports, and other operational control information to identify the cause of the exceedance.
2. The Permittee shall initiate actions to return to compliance with the DL as soon as practicable.
3. Within 30 days of a DL being exceeded, the Permittee shall submit to the ADEQ Water Quality Compliance Section, a summary of the findings of the investigation, the cause of the DL being exceeded, and actions taken to resolve the problem.
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.

2.6.4 Aquifer Quality Limit Violation

1. If an AQL set in Section 4.2 Tables 4.2.3 has been exceeded, the Permittee may conduct verification sampling within 5 days of becoming aware of an AQL exceedance. The permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
2. If verification sampling confirms that the AQL is violated for any parameter or if the Permittee opts not to perform verification sampling, then the Permittee shall increase the frequency of monitoring to monthly. In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.
   If the AQL exceedance is verified, or if the Permittee elects not to conduct verification sampling, then the permittee also shall submit written reports as required by Section 2.7.3. The report required by Section 2.7.3(2) shall include a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. A verified exceedance of an AQL will be considered a violation unless the Permittee demonstrates within 90 days or a longer time period if agreed to by ADEQ that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, the Permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or

groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.3. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring or other actions.

3. Upon review of the final submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring or other actions.
4. The Permittee shall notify any downstream or downgradient users who may be directly affected by the discharge.
5. The increased monitoring required as a result of an AQL exceedance may be reduced to the regular frequency, if the results of three (3) sequential sampling events demonstrate that no parameters exceed the AL.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241 That Are Not Addressed Elsewhere in Section 2.6

2.6.5.1 Duty to Respond

The Permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

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

2.6.5.4 Reporting Requirements

The Permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Water Quality Compliance Section within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3(2). If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 and actions identified in the approved contingency plan included in the permit application referenced in Section 5.0 of this permit 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 Water Permits Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

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

Within 30 days of completion of any corrective action, the Permittee shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

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

2.7.1 Self –monitoring Report Form (SMRF)

1. The Permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
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 quarter, the Permittee shall enter "not required" on the SMRF and submit the report to the Water Quality Compliance Section, Data Unit. The Permittee shall use the format devised by ADEQ.
3. The following tables contained in Section 4.2 list the parameters to be monitored and the frequency for reporting results on the SMRFs.
   - Table 4.2.3, Quarterly Compliance Monitoring (groundwater)
   - Table 4.2.4, Leak Detection and Removal System Monitoring
   - Table 4.2.5, Disposition Monitoring for Ripsey Wash Tailing Storage Facility
4. In addition to the SMRFs, the information contained in Section 2.7.4 shall be included or any other permit condition being reported in the current reporting period:
   - Table 4.2.1, Facility Inspection Monitoring- Log Book
   - Table 4.2.2, Ambient Groundwater Monitoring
   - Table 4.3.1, Compliance Discharge Characterization for BADCT Failures

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 time inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book, and
7. Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The Permittee shall notify the Water Quality Compliance Section Unit in writing within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition or discharge limitation, an AQL violation, or of an Alert Level exceedance.
2. The Permittee shall submit a written report to the Water Quality Compliance Section within 30 days of becoming aware of the violation of any permit condition or discharge limitation, an

AQL violation, or an AL exceedance. The report shall document all of the following:

a. Identification and description of the permit condition for which there has been a violation and a description of its cause.
b. The period of violation including exact date(s) and time(s), if known, and the anticipated 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 Aquifer Water Quality Standard or an AQL at a POC.
e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

2.7.4.1 Ambient Groundwater Monitoring Report

The permittee shall submit a report of the ambient groundwater monitoring as required under Section 2.5.3.2 and in accordance with the Compliance Schedule in Section 3.5. The Ambient Groundwater Monitoring Report shall include summary tables of all groundwater quality data collected during the ambient groundwater monitoring period.

The Ambient Groundwater Monitoring Report shall include: depth to groundwater measurements, groundwater elevation measurements, groundwater flow calculations, groundwater contour maps, certified laboratory reports, field data sheets, quality assurance/quality control (QA/QC) procedures, an assessment of groundwater flow and the statistical calculations used to calculate each AL and AQL.

2.7.4.2 Annual Report

The permittee shall submit an annual report in narrative and/or tabular form to the Water Quality Compliance Section, Enforcement Unit that briefly summarizes the status of compliance under this permit. The report shall identify any contingency actions taken, violations of this permit, any Alert Levels or Discharge Limitations, or Aquifer Quality Limits that have been exceeded; shall summarize the findings of the monitoring required by Section 2.5, Section 2.6, and Section 4.2; and shall include any information specifically required by permit condition to be submitted in the annual report. The annual report is to be submitted by January 30 of each year to cover activities from January 1 through December 31st of the previous year, consistent with Section 2.7.6.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Data and Enforcement Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to:

Arizona Department of Environmental Quality
Water Quality Inspections and Compliance Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4497

All documents required by this permit to be submitted to the Water Permits Section shall be directed to:

Arizona Department of Environmental Quality
Water Permits Section
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

Monitoring conducted:	Report due by:
Annual: January-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Water Permits Section and Water Quality Compliance Section shall be notified within 10 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 Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater.

At the time of notification the Permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ's approval, the Permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the Permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three years. If the Permittee intends to permanently cease operation of any facility, the Permittee shall submit closure notification, as set forth in Section 2.9 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 Water Quality Compliance Section of the Permittee's intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, the Permittee shall submit for approval to the Water Permits Section, 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 Water Permits Section indicating that the approved Closure Plan has been implemented fully and providing supporting documentation to demonstrate that clean closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, ADEQ shall issue a letter of approval to the Permittee at that time and shall terminate the permit.. 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 aquifer water quality standards at the applicable point of compliance;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;
5. Further action is necessary to meet property use restrictions.

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 Water Permits Section.

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

2.10.1 Post-closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2 Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]
For each compliance schedule item listed below, the Permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Water Permits Section. A copy of the cover letter must also be submitted to the Water Quality Compliance Section.

No.	Description	Due by:	Permit Amendment
3.1	The permittee shall submit a signed, dated and sealed Engineer's Certificate of completion for the starter dams and associated facilities for the Ripsey TSF. The certification shall indicate that the facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and subgrade preparation.	Within 90 days of 90 days of completion of construction	No
3.2	The permittee shall submit a signed, dated and sealed Engineer's Certificate of completion for the Main Reclaim Impoundment. The certification shall indicate that the facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and subgrade preparation.	Within 90 days of 90 days of completion of construction	No
3.3	The permittee shall submit a signed, dated and sealed Engineer's Certificate of completion for the East Reclaim Impoundment. The certification shall indicate that the facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and subgrade preparation.	Within 90 days of 90 days of completion of construction	No
3.4	The permittee shall submit a signed, dated and sealed Engineer's Certificate of completion for the Drain Down Impoundment. The certification shall indicate that the facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and subgrade preparation.	Within 90 days of 90 days of completion of construction	No
3.5	The permittee shall submit an Ambient Groundwater Monitoring Report with a Permit Amendment application, along with copies of all laboratory analytical reports, field notes, QA/QC procedures used in collection and analysis of the samples, and a report including the statistical calculations of the ALs, and AQLs. The application shall include the sampling location for Section 4.2.5, Deposition Monitoring for Ripsey Wash Tailing Storage Facility. Begin monitoring in the quarter prior to construction under Table 4.2.3. To receive the SMRFs for Quarterly monitoring contact the ADEQ Data Unit.	Submit within 30 days of receipt of laboratory report for final ambient sample.	Yes
3.6	The permittee shall submit a demonstration that the Self-assurance financial assurance mechanism listed in Section 2.1, Financial Capability, remains viable. 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 and discharging facilities have not been added. The demonstration shall also include information in support of the self-assurance demonstration as required in A.A.C. R18-9-A203(C)(1).	2 years from the date of permit signature, and every 2 years thereafter, for the duration of the permit.	No
3.7	The permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a, and an updated financial assurance demonstration for the updated cost estimate as per A.A.C. R18-9-A203.	6 years from the date of permit signature, and every 6 years thereafter, for the duration of the permit.	Yes
3.8	If the permittee wishes to deposit a greater quantity of tailings, increase dam crest elevation above 2200 feet amsl, or deposit tailings at a greater daily rate, then the permittee shall apply for a permit amendment.		Yes

TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (or CONSTRUCTION REQUIREMENTS)

Not Required

4.2 COMPLIANCE AND OPERATIONAL MONITORING

Table 4.2.1 Facility Inspection Monitoring (Log Book)
Table 4.2.2 Ambient Groundwater Monitoring
Table 4.2.3 Quarterly Compliance Monitoring (Groundwater)
Table 4.2.4 Leak Collection and Removal System Monitoring
Table 4.2.5 Deposition Monitoring for Ripsey Wash Tailing Storage Facility

4.3 Contingency Monitoring

Table 4.3.1 Compliance Discharge Characterization for BADCT Failures

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.1
FACILITY INSPECTION (OPERATIONAL MONITORING) - LOG BOOK[1]

RIPSEY WASH TAILING STORAGE FACILITY - Log Book

Parameter	Performance Standard	Monitoring Frequency	Reporting[2] Frequency
Facility Height	Does not exceed 2,200ft amsl	Annually	Annually
Structural Integrity	No visible structural weakness, seepage erosion, or other hazardous conditions	Monthly	Annually
Integrity of Pumping System	Good working condition	Weekly	Annually

RECLAIM IMPOUNDMENTS[3] - Log Book

Parameter	Performance Standard	Monitoring Frequency	Reporting Frequency
Freeboard[4]	Minimum of two feet	Weekly	Annually
Anchor trench integrity for HDPE-lined impoundments	No impairment	Monthly	Annually
Embankment integrity	No visible structural weakness, seepage erosion, or other hazardous conditions	Monthly	Annually
Liner Integrity	No visible cracks, punctures, or deteriorations of liner	Monthly	Annually
Integrity of Pumping System	Good working condition	Monthly	Annually
Sediments/sludge	Remove sediments/sludge as needed to maintain at least 90 percent of designed capacity	Monthly	Annually

DRAIN DOWN IMPOUNDMENT - Log Book

Parameter	Performance Standard	Monitoring Frequency[3]	Reporting Frequency
Freeboard[4]	Minimum of two feet	Weekly	Annually
Anchor trench integrity for HDPE-lined impoundments	No impairment	Monthly	Annually
Embankment integrity	No visible structural weakness, seepage erosion, or other hazardous conditions	Monthly	Annually
Liner Integrity	No visible cracks, punctures, or deteriorations of liner	Monthly	Annually
Integrity of Pumping System	Good working condition	Monthly	Annually

[1] 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.
[2] Reporting shall be annually as per Section 2.7.4.2.
[3] Reclaim Impoundments = Main Reclaim Impoundment and East Reclaim Impoundment.
[4] Freeboard shall be monitored weekly and after a two inch – 24 hour rainfall event (as measured from the nearest rain gauge).

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.2
AMBIENT GROUNDWATER MONIOTRING[5]

Sampling Point Number	Sampling Point Identification	Latitude	Longitude
1	MW-1A Located in the Ripsey Wash drainage downgradient (north-northeast) of the planned TSF and the Main Reclaim Impoundment	33° 05' 54" N	111° 00' 29" W
2	MW-1B Located in the Ripsey Wash drainage downgradient (north-northeast) of the planned TSF and the Main Reclaim Impoundment	33° 05′ 54″ N	111° 00′ 29″ W
3	MW-2 Located downgradient (northeast) of the East Reclaim Impoundment	33° 05′ 47″ N	110° 58′ 54″ W
4	MW-3 Located along the west edge of the TSF between Ripsey Wash and Zelleweger Wash	33° 05′ 16″ N	111° 00′ 44 ″ W

Parameter	AL[6]	AQL[7]	Units	Monitoring Frequency[8]	Reporting Frequency
Depth to Water Level	Monitor[9]	Monitor	Feet	Quarterly	AGMR[10]
Water Level Elevation	Monitor	Monitor	amsl	Quarterly	AGMR
Temperature	Monitor	Monitor	Degrees	Quarterly	AGMR
pH	Monitor	Monitor	S.U.	Quarterly	AGMR
Specific Conductance	Monitor	Monitor	µmhos/cm	Quarterly	AGMR
Total Dissolved Solids	Monitor	Monitor	mg/L	Quarterly	AGMR
Fluoride	Monitor	Monitor	mg/L	Quarterly	AGMR
Total Alkalinity	Monitor	Monitor	mg/L	Quarterly	AGMR
Carbonate	Monitor	Monitor	mg/L	Quarterly	AGMR
Bicarbonate	Monitor	Monitor	mg/L	Quarterly	AGMR
Chloride	Monitor	Monitor	mg/L	Quarterly	AGMR
Sulfate	Monitor	Monitor	mg/L	Quarterly	AGMR
Sodium	Monitor	Monitor	mg/L	Quarterly	AGMR
Potassium	Monitor	Monitor	mg/L	Quarterly	AGMR
Calcium	Monitor	Monitor	mg/L	Quarterly	AGMR

[5] Monitoring may be discontinued after the ambient groundwater monitoring report has been completed as per Section 2.5.4 and in accordance with Compliance Schedule 3.5.
[6] AL = Alert Levels
[7] AQL = Aquifer Quality Limits
[8] Eight rounds of groundwater quality samples will be obtained from each of the four POC wells over a two-year period. The first round of ambient monitoring was performed on February 26, 2014. Subsequent monitoring rounds will be performed at approximately 3-month intervals.
[9] Monitor = Analysis is required but an AQL and/or AL is not established in the permit
[10] AGMR= Ambient Groundwater Monitoring Report

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.2

AMBIENT GROUNDWATER MONIOTRING (continued)

Parameter	AL[11]	AQL[12]	Units	Monitoring Frequency[13]	Reporting Frequency
Magnesium	Monitor[14]	Monitor	mg/L	Quarterly	AGMR
Nitrate + Nitrite	Reserve[15]	Reserve	mg/L	Quarterly	AGMR
Fluoride	Reserve	Reserve	mg/L	Quarterly	AGMR
Aluminum	Monitor	Monitor	mg/L	Quarterly	AGMR
Antimony	Reserve	Reserve	mg/L	Quarterly	AGMR
Arsenic	Reserve	Reserve	mg/L	Quarterly	AGMR
Beryllium	Reserve	Reserve	mg/L	Quarterly	AGMR
Barium	Reserve	Reserve	mg/L	Quarterly	AGMR
Cadmium	Reserve	Reserve	mg/L	Quarterly	AGMR
Chromium	Reserve	Reserve	mg/L	Quarterly	AGMR
Iron	Monitor	Monitor	mg/L	Quarterly	AGMR
Lead	Reserve	Reserve	mg/L	Quarterly	AGMR
Mercury	Reserve	Reserve	mg/L	Quarterly	AGMR
Nickel	Reserve	Reserve	mg/L	Quarterly	AGMR
Selenium	Reserve	Reserve	mg/L	Quarterly	AGMR
Thallium	Reserve	Reserve	mg/L	Quarterly	AGMR
Copper	Monitor	Monitor	mg/L	Quarterly	AGMR
Cobalt	Monitor	Monitor	mg/L	Quarterly	AGMR
Manganese	Monitor	Monitor	mg/L	Quarterly	AGMR
Zinc	Monitor	Monitor	mg/L	Quarterly	AGMR

[11] AL = Alert Levels
[12] AQL = Aquifer Quality Limits
[13] Eight rounds of groundwater quality samples will be obtained from each of the four POC wells over a two-year period
[14] Monitor = Analysis is required but an AQL and/or AL is not established.
[15] Reserved = Reserved to be determined as part of Ambient Groundwater Monitoring in accordance with the Compliance Schedule in Section 3.5.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.3

QUARTERLY COMPLIANCE MONIOTRING[16] (GROUNDWATER)

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
1	MW-1A Located in the Ripsey Wash drainage downgradient (north-northeast) of the planned TSF and the Main Reclaim Impoundment			33° 05' 54" N	111° 00' 29" W
2	MW-1B Located in the Ripsey Wash drainage downgradient (north-northeast) of the planned TSF and the Main Reclaim Impoundment			33° 05′ 54″ N	111° 00′ 29″ W
3	MW-2 Located downgradient (northeast) of the East Reclaim Impoundment			33° 05′ 47″ N	110° 58′ 54″ W
4	MW-3 Located along the west edge of the TSF between Ripsey Wash and Zelleweger Wash			33° 05′ 16″ N	111° 00′ 44 ″ W
Parameter	**AL[17]**	**AQL[18]**	**Units**	**Monitoring Frequency**	**Reporting Frequency**
Depth to Water Level	Monitor[19]	Monitor	Feet	Quarterly	Quarterly
Water Level Elevation	Monitor	Monitor	amsl	Quarterly	Quarterly
Temperature	Monitor	Monitor	Degrees	Quarterly	Quarterly
pH	Monitor	Monitor	S.U.	Quarterly	Quarterly
Specific Conductance	Monitor	Monitor	µmhos/cm	Quarterly	Quarterly
Total Dissolved Solids	Monitor	Monitor	mg/L	Quarterly	Quarterly
Fluoride	Monitor	Monitor	mg/L	Quarterly	Quarterly
Total Alkalinity	Monitor	Monitor	mg/L	Quarterly	Quarterly
Carbonate	Monitor	Monitor	mg/L	Quarterly	Quarterly
Bicarbonate	Monitor	Monitor	mg/L	Quarterly	Quarterly
Chloride	Monitor	Monitor	mg/L	Quarterly	Quarterly
Sulfate	Monitor	Monitor	mg/L	Quarterly	Quarterly
Sodium	Monitor	Monitor	mg/L	Quarterly	Quarterly
Potassium	Monitor	Monitor	mg/L	Quarterly	Quarterly
Calcium	Monitor	Monitor	mg/L	Quarterly	Quarterly

[16]Commence monitoring under this table upon completion of the ambient groundwater monitoring as per Section 2.5.3. and in accordance with compliance Schedule 3.5.
[17] AL = Alert Levels
[18] AQL = Aquifer Quality Limits
[19] Monitor = Analysis is required but an AQL and/or AL is not established in the permit

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.3

QUARTERLY COMPLIANCE MONIOTRING (continued)

Parameter	AL[20]	AQL[21]	Units	Monitoring Frequency	Reporting Frequency
Magnesium	Monitor[22]	Monitor	mg/L	Quarterly	Quarterly
Nitrate + Nitrite	Reserved	Reserved	mg/L	Quarterly	Quarterly
Fluoride	Reserved	Reserved	mg/L	Quarterly	Quarterly
Aluminum	Reserved	Reserved	mg/L	Quarterly	Quarterly
Antimony	Reserved	Reserved	mg/L	Quarterly	Quarterly
Arsenic	Reserved	Reserved	mg/L	Quarterly	Quarterly
Beryllium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Barium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Cadmium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Chromium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Iron	Monitor	Monitor	mg/L	Quarterly	Quarterly
Lead	Reserved	Reserved	mg/L	Quarterly	Quarterly
Mercury	Reserved	Reserved	mg/L	Quarterly	Quarterly
Nickel	Reserved	Reserved	mg/L	Quarterly	Quarterly
Selenium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Thallium	Reserved	Reserved	mg/L	Quarterly	Quarterly
Copper	Monitor	Monitor	mg/L	Quarterly	Quarterly
Cobalt	Monitor	Monitor	mg/L	Quarterly	Quarterly
Manganese	Monitor	Monitor	mg/L	Quarterly	Quarterly
Zinc	Monitor	Monitor	mg/L	Quarterly	Quarterly

[20] AL = Alert Levels
[21] AQL = Aquifer Quality Limits
[22] Monitor = Monitoring is required but an AQL and/or AL is not established.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.4

LEAK COLLECTION AND REMOVAL SYSTEM MONITORING[23]

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LCRS Sump	Parameter	AL1[24] (gpd)	AL2[25] (gpd)	Monitoring[26] Method	Reporting Frequency[27]
Main Reclaim Impoundment Sump	Liquid Pumped[28]	3,114	25,299	Continuous[29]	Annually
East Reclaim Impoundment Sump	Liquid Pumped	846	7,082	Continuous	Annually
Drain Down Impoundment Sump	Liquid Pumped	735	6,320	Continuous	Annually

[23] The Alert Level 1 (AL#1) or Alert Level 2 (AL#2) shall be exceeded when the cumulative amount of leakage pumped from the sumps for an impoundment is greater than the applicable quantity in the Table.

[24] AL#1= Exceedance in Alert Level #1: Increase LCRS monitoring to daily, including inspection of the LCRS and measurement of fluids evacuated from the collection sump, until the leakage rate is stabilized below Alert Level # 1. The permittee shall place into action the requirements presented in 2.6.2.2. Exceedance of an AL is not a violation.

[25] AL#2 = Exceedance in Alert Level #2: Immediately cease discharge and collect a single sample from parameter set in Table 4.3.1. The permittee shall place into action the requirements presented in 2.6.2.3. Exceedance of an AL is not a violation.

[26] LCRS inspection and leakage quantification shall be performed while the impoundment is "in use" (when fluids are present in the impoundment and/or LCRS). Evacuation of fluids in the sump shall be performed as necessary for accurate monitoring and effective operation of the collection system. Routine analysis of sump fluids is not required. However, characterization of sump fluids is required as a contingency action in Section 2.6.

[27] The Permittee shall report annually of the LCRS monitoring. If no event occurred, the Permittee shall state the fact in the Self-Monitoring Report form.

[28] The "Liquid Pumped" value to be reported is the amount of liquid pumped from the LCRS sump in gpd.

[29] LCRS pumping shall be continuous as indicated by the fluid level in the sump. Review of pumped quantities shall be performed when possible while the Impoundment is in operation.

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.2.5

DEPOSITION MONITORING FOR RIPSEY WASH TAILING STORAGE FACILITY

Sampling Point	Maximum Deposition Limit	Sampling Frequency	Reporting Frequency	Latitude	Longitude
5	45,000 dry tons per day[30]	Daily Average	Quarterly	TBD[31]	TBD

[30] Discharge to the R1 tailings impoundment shall be limited to a maximum deposition of 45,000 tpd by dry weight of tailings from the Ray Operations concentrator.
[31] Sampling point shall be provided per Section 3.5.

4.3 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE 4.3.1
CONTINGENCY DISCHARGE CHARACTERIZATION FOR BADCT FAILURES AND OVERTOPPING[32]

Parameter	Units	Monitoring Frequency[33]
pH (field)	Standard Units	One sample
Alkalinity	mg/L	One sample
Total Dissolved Solids (TDS)	mg/L	One sample
Specific Conductance (lab)	umhos/cm	One sample
Hardness [34]	Standard Units	One sample
Nitrate + Nitrite	mg/L	One sample
Calcium	mg/L	One sample
Chloride	mg/L	One sample
Fluoride	mg/L	One sample
Magnesium	mg/L	One sample
Potassium	mg/L	One sample
Sodium	mg/L	One sample
Sulfate	mg/L	One sample
Antimony	mg/L	One sample
Arsenic	mg/L	One sample
Barium	mg/L	One sample
Beryllium	mg/L	One sample
Cadmium	mg/L	One sample
Chromium	mg/L	One sample
Lead	mg/L	One sample
Mercury	mg/L	One sample
Nickel	mg/L	One sample
Selenium	mg/L	One sample
Thallium	mg/L	One sample
Zinc	mg/L	One sample
Benzene	mg/L	One sample
Ethylbenzene	mg/L	One sample
Toluene	mg/L	One sample
Total Xylenes	mg/L	One sample

[32] Monitor under this table per Section 2.6.3.1, Surface Impoundments, Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid, Section 2.6.3.2, Overtopping of an Impoundment.
[33] One verification sample shall be taken within 5 days of an event.
[34] Hardness may be expressed as the sum of calcium plus magnesium as calcium carbonate (CaCO3)
mg/L = milligrams per liter umhos/cm = micromhos per centimeter

5.0 REFERENCES AND PERTINENT INFORMATION

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

1.	APP Application, dated:	June 20, 2014
2.	Final Hydrologist memo, dated:	May 6, 2015
3.	Final Engineering memo, dated:	July 12, 2015
4.	Public Notice, dated:	TBD
5.	Responsive Summary, dated:	TBD

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

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

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

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

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

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

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The Permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the Permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

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

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

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

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

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

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

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

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

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

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

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

6.10 Permit Action: Amendment, Transfer, Suspension & Revocation
[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, renewed, or revoked for cause, under the rules of the Department.

The Permittee shall notify the Water Permits Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

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

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

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

7.3 Permit Transfer

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