

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 29846**

I. INTRODUCTION

This Class II, synthetic minor air quality control operating permit is for the operation of an open pit mine located in Bagdad, Arizona. The mine is owned and operated by Freeport-McMoRan Bagdad Inc. (FMBI). This permit renews and supersedes Permit #0363-89.

A. Company Information

Facility Name: Bagdad Mine
Facility Address: Terminus of Highway 96
Bagdad, AZ 86321
Yavapai County
Mailing Address: PO Box 245
Bagdad, AZ 86321

B. Attainment Classification

The area is attainment for all criteria pollutants.

C. Learning Sites Evaluation

In accordance with ADEQ's Environmental Permits and Approvals Near Learning Sites Policy, the Department conducted an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

There are no learning sites within two miles of the facility.

II. FACILITY DESCRIPTION

A. Process Description

The major processes at the Bagdad mine include:

1. Open pit mining including drilling, blasting and hauling of ore and waste rock;
2. Crushing and conveying of ore to the mill/concentrator area;
3. Milling and concentrating of sulfide ore to produce copper and molybdenum (moly) concentrate;
4. Heap leaching of oxide ore and low-grade sulfide ore to produce pregnant leach solution (PLS);

5. Pressure leaching of concentrate to produce additional PLS; and
6. Solution extraction and electrowinning (SX/EW) to produce high purity copper cathodes from PLS.

B. Air Pollution Control Equipment

1. Scrubbers and baghouses are installed to control particulate matter emissions. Fugitive dust emissions are controlled by using water sprays, road watering and chemical suppressants.
2. A flare, tank covers and submerged filling devices are used to control volatile organic compound (VOC) emissions from the steam deoiler, the SX/EW process, and the gasoline tanks.

III. COMPLIANCE HISTORY

There have been 56 inspections of this facility since May 12, 1995. No cases or violations have developed as a result of the inspections.

IV. EMISSIONS

FMBI has accepted a number of enforceable emission limits in order to limit the potential to emit (PTE) of the Bagdad mine to less than 100 tons per year (tpy). The mine can be operated under one of two permitted operating scenarios and each scenario contains differing emissions limits. Therefore, each scenario has a different PTE. Scenario 1 represents the current configuration of the mine and Table 1 represents the PTE under scenario 1. Scenario 2 represents planned changes to the primary crushing operations, the overland conveyor operations, and the satellite crushing operations. Table 2 represents the PTE under scenario 2. Information on fugitive emissions can be found in the application.

Table 1: PTE of Facility under Operating Scenario #1(for non-fugitive emissions)

Pollutant	Facility Potential to Emit (tons/year)
PM₁₀	94.7
PM	112.8
NO_x	51.3
CO	40.7
SO₂	22.6
VOC	41.3

Table 2: PTE of Facility under Operating Scenario #2 (for non-fugitive emissions)

Pollutant	Facility Potential to Emit (tons/year)
PM₁₀	94.1
PM	103.3
NO_x	51.3
CO	40.7
SO₂	22.6
VOC	41.3

- 1- Emission Calculations are based on July 25, 2008, application for Bagdad Expansion Project.
2. PM emissions are not used to determine major source status. See memo from Lydia Wegman, Deputy Director of Office of Air Quality Planning and Standards "Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V", October 16, 1995.

V. APPLICABLE REGULATIONS

Table 3 identifies applicable regulations and verification as to why that standard applies.

Table 3: Verification of Applicable Regulations

Unit	Control Device	Rule	Verification
All metallic mineral processing equipment; excluding overland conveyor belts, the lengths of all conveyor belts between the transfer points, radial stackers, vibrating feeders, dump pockets, hoppers, and any metallic mineral processing equipment which commenced construction prior to August 24, 1982.	Baghouses; Scrubbers Water sprays; Flare Material moisture	40 CFR 60.382(a)(1) 40 CFR 60.382(a)(2) 40 CFR 60.382(b) 40 CFR 60.384(a) 40 CFR 60.384(b) 40 CFR 60.385(b) 40 CFR 60.385(c) 40 CFR 60.385(d) 40 CFR 60.386(a) 40 CFR 60.386(b)(2) 40 CFR 60.386(c) 40 CFR 60.386(d)	Crushers, screens, bucket elevators, conveyor belt transfer points, thermal dryers, product packaging stations storage bins, enclosed storage areas, truck unloading stations, and truck loading stations located at metallic mineral processing plants are affected facilities under New Source Performance Standards (NSPS) Subpart LL if constructed after August 24, 1982.
All metallic mineral processing equipment which is not subject to NSPS Subpart LL.	Baghouses; Scrubbers; Water sprays; Material moisture	A.A.C. R18-2-702.B.3 A.A.C. R18-2-702.C A.A.C. R18-2-721.B.1 A.A.C. R18-2-721.B.2 A.A.C. R18-2-721.D A.A.C. R18-2-721.F	The PM limits and recordkeeping requirements from A.A.C. R18-2-721 apply to material handling conducted at an existing nonferrous metals industry source. The opacity standards from A.A.C R18-2-702 apply to existing stationary point sources.

Unit	Control Device	Rule	Verification
Fuel Burning Equipment excluding Package Boiler G1	N/A	A.A.C. R18-2-724.C.1 A.A.C. R18-2-724.J	These standards apply to fossil fuel fired industrial equipment rated at between .5 MMBTU/hr and 250 MMBTU/hr in which the products of combustion do not come into direct contact with process materials.
Package Boiler G1	N/A	40 CFR 60.48c(g)(1) 40 CFR 60.48c(g)(2) 40 CFR 60.48c(i) 40 CFR 60.48c(j).	NSPS Subpart Dc applies to steam generating units with a capacity between 10 MMBtu/hr and 100 MMBtu/hr which were constructed after June 9, 1989.
Portable Aggregate System	Water Sprays	40 CFR 60.672(b) 40 CFR 60.672(c)	NSPS Subpart OOO applies to nonmetallic mineral processing plants constructed after August 31, 1983.
Lime Handling System; Pressure Leach Vessel (G2); Cooling Tower (G3); Lime Storage Bins (LSB-G4, LSB-LSB1, and LSB-LSB2); Additive Feeding System; Solution extraction/electrowinning process (SX/EW)	Baghouses; Covers on tanks; Dispersion balls or equivalent method to control acid emissions	A.A.C. R18-2-730.D A.A.C. R18-2-730.F A.A.C. R18-2-730.G	These standards apply to unclassified sources.
Internal Combustion Engines	None	A.A.C.R18-2-719.B A.A.C.R18-2-719.C.1 A.A.C.R18-2-719.E A.A.C.R18-2-719.F A.A.C.R18-2-719.H A.A.C.R18-2-719.I A.A.C.R18-2-719.J	<p>These standards apply to existing stationary rotating machinery.</p> <p>The compression ignition engines are not subject to NSPS Subpart III because they were constructed prior to April 1, 2006.</p> <p>The propane engines are not subject to NSPS Subpart JJJ because they were constructed prior to January 1, 2009.</p> <p>The National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ is not applicable because the Bagdad mine is not a major source of HAPS and the engines were built prior to June 12, 2006.</p>

Unit	Control Device	Rule	Verification
Gasoline Tanks / Dispensing Facilities	Seals; Submerged filling devices	A.A.C. R18-2-710.B A.A.C. R18-2-710.D A.A.C. R18-2-710.E.1 40 CFR 63.11113(a)(1) 40 CFR 63.11113(a)(2) 40 CFR 63.11113(b) 40 CFR 63.11116(a)(1)-(4) 40 CFR 63.11116(b)	A.A.C. R-18-2-710 applies to gasoline tanks. A.A.C. R-18-2-710.E.2,3, and 4 are not applicable because the gasoline can never reach a true vapor pressure of 9.1 psia. NESHAP Subpart CCCCCC applies to gasoline dispensing facilities.
Fugitive dust sources	Water and other reasonable precautions.	A.A.C. R18-2-604.A,B A.A.C. R18-2-605.A,B A.A.C. R18-2-606 A.A.C. R18-2-607.A,B A.A.C. R18-2-614 A.A.C. R18-2-702.B	These standards are applicable to all fugitive dust sources at the facility.
Mobile sources	Water Sprays/Water Truck for dust control	A.A.C. R18-2-801.A,B A.A.C. R18-2-802.A,B A.A.C. R18-2-804.A,B	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702.B A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702.B A.A.C. R-18-2-727.A A.A.C. R-18-2-727.B A.A.C. R-18-2-727.C A.A.C. R-18-2-727.D	This standard is applicable to any spray painting operation.
Demolition/renovation operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

VI. PREVIOUS PERMIT CONDITION

Table 4 compares the substantive conditions in Significant Permit Revision No. 1001720 with the conditions in this renewal permit and cross-references the previous permit conditions to their location in the renewal permit.

Table 4: Comparison of Previous and Current Permit Conditions

Condition # in Permit No. 1001720	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment A			x		This Attachment has been revised and the most recent Attachment "A" is used for this permit.
Attachment B					
Condition II.A.1			x		This opacity standard has been changed from 40% to 20 %.
Condition II.A.2		x			The PM standard has been retained.
Condition II.A.3			x		This voluntarily accepted PM ₁₀ emission limit on the Pressure Leach Vessel has been increased from 2.75 lb/hr to 4.0 lb/hr under Operating Scenario 1 and Emission Cap 1 has been decreased by a similar amount. Under Operating Scenario 2, the Pressure Leach Vessel is included in Emission Cap 5.
Condition II.B.1		x			This air pollution control equipment requirements has been retained.
Condition II.B.2		x			This air pollution control equipment requirement has been retained.
Condition II.C.1.a		x			This performance testing requirement has been retained.
Condition II.C.1.b		x			This performance testing requirement has been retained.
Condition II.C.2		x			This air pollution control equipment requirement has been retained.
Condition II.C.3			x		This performance test requirement for the fourth year of the permit term has been replaced by annual testing.
Condition II.C.4			x		This requirement for annual opacity tests has been replaced by frequent opacity surveys.
Condition II.C.5	x				This performance test reporting requirement is unnecessary because these reports are required by Attachment "A".

Condition # in Permit No. 1001720	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition II.D.1		x			This monitoring requirement has been retained.
Condition II.D.2		x			This monitoring requirement has been retained.
Condition II.D.3		x			This monitoring requirement has been retained.
Condition II.D.4			x		This monitoring requirement has been changed to semiannual.
Condition II.D.5		x			This opacity monitoring requirement has been retained.
Condition III.A		x			This alternate operating scenario has been incorporated into other conditions.
Condition III.B		x			This alternate operating scenario has been incorporated into other conditions.
Condition III.C		x			This alternate operating scenario has been incorporated into other conditions.
Condition III.D.1			x		This performance test requirement for the fourth year of the permit term has been replaced by annual testing.
Condition III.D.2		x			This alternate operating scenario has been incorporated into other conditions.
Condition IV.A.1		x			This fuel requirement has been retained.
Condition IV.A.2	x				This hourly limit has been removed as it is not required to keep the PTE of NO _x below 100 tpy.
Condition IV.B		x			This air pollution control equipment requirement has been retained.
Condition IV.C.1		x			This recordkeeping requirement has been retained.
Condition IV.C.2		x			This recordkeeping requirement has been retained.
Condition IV.C.3	x				This initial notification requirement is unnecessary since initial notification has already occurred.
Condition V.A.1			x		This opacity standard has been changed from 40% to 20 %.
Condition V.A.2		x			The PM standard has been retained.

Condition # in Permit No. 1001720	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition V.A.3.a		x			This general air pollution requirement has been retained.
Condition V.A.3.b		x			This general air pollution requirement has been retained.
Condition V.A.3.c		x			This general air pollution requirement has been retained.
Condition V.B		x			This air pollution control equipment requirement has been retained.
Condition V.C		x			This annual opacity performance test has been replaced by frequent opacity surveys.
Condition V.D.1		x			This recordkeeping requirement has been retained.
Condition V.D.2		x			This opacity survey requirement has been retained.
Condition V.D.3		x			This recordkeeping requirement has been retained.
Condition V.D.4		x			This recordkeeping requirement has been retained.
Condition VI.A		x			This opacity standard has been retained.
Condition VI.B		x			This air pollution control equipment requirement has been retained.
Condition VI.C			x		This annual opacity performance test has been replaced by frequent opacity surveys.
Condition VI.D		x			This opacity survey requirement has been retained.
Condition VII.A			x		This 14.016 tpy PM ₁₀ limitation has been replaced by a 3.2 lb/hr limitation.
Condition VII.B		x			This air pollution control equipment requirement has been retained.
Condition VII.C.1			x		This performance test requirement has been changed to an annual test.
Condition VII.C.2			x		This performance test requirement has been changed to an annual test.
Condition VII.D.1		x			This monitoring requirement has been retained.
Condition VII.D.2		x			This monitoring requirement has been retained.

Condition # in Permit No. 1001720	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition VII.D.3		x			This monitoring requirement has been retained.
Condition VII.D.4			x		This monitoring requirement has been changed to semiannual.
Condition VIII.A			x		This 14.016 tpy PM ₁₀ limitation has been replaced by a 3.2 lb/hr limitation.
Condition VIII.B		x			This air pollution control equipment requirement has been retained.
Condition VIII.C.1			x		This performance test requirement has been changed to an annual test.
Condition VIII.C.2			x		This performance test requirement has been changed to an annual test.
Condition VIII.D.1		x			This monitoring requirement has been retained.
Condition VIII.D.2		x			This monitoring requirement has been retained.
Condition VIII.D.3		x			This monitoring requirement has been retained.
Condition VIII.D.4			x		This monitoring requirement has been changed to semiannual.
Condition IX.A			x		This 25.84 tpy PM ₁₀ limitation has been replaced by a 4.7 lb/hr limitation.
Condition IX.B		x			This air pollution control equipment requirement has been retained.
Condition IX.C.1			x		This performance test requirement has been changed to an annual test.
Condition IX.C.2			x		This performance test requirement has been changed to an annual test.
Condition IX.D.1		x			This monitoring requirement has been retained.
Condition IX.D.2		x			This monitoring requirement has been retained.
Condition IX.D.3		x			This monitoring requirement has been retained.
Condition IX.D.4			x		This monitoring requirement has been changed to semiannual.
Condition X			x		These general non-point source requirements have been updated.

Condition # in Permit No. 1001720	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition XI			x		These general mobile source requirements have been updated.
Condition V			x		These general standards for periodic activity have been updated.

Table 5 compares the substantive conditions in Significant Permit Revision No. 45670 with the conditions in this renewal permit and cross-references the previous permit conditions to their location in the renewal permit.

Table 5: Comparison of Previous and Current Permit Conditions

Condition # in Permit No. 45670	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment B					
Condition II.A		x			This fuel limitation has been retained.
Condition II.B.1.(a)		x			This PM standard has been retained.
Condition II.B.1.(b)		x			This PM standard has been retained.
Condition II.C.1		x			This opacity standard has been retained.
Condition III.A.1		x			This general air pollution requirement has been retained.
Condition III.A.2		x			This general air pollution requirement has been retained.
Condition III.A.3		x			This general air pollution requirement has been retained.
Condition III.B		x			This air pollution control equipment requirement has been retained.
Condition III.C		x			This recordkeeping requirement has been retained.
Condition IV.A.1		x			This PM standard has been removed. The standard is based on the PM standard in A.A.C.R18-2-721. This standard is also in the permit.

Condition # in Permit No. 45670	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition IV.A.2		x			This recordkeeping requirement has been retained.
Condition IV.B.1			x		This opacity standard has been revised from 40% to 20%.
Condition IV.B.2		x			This requirement to perform a monthly opacity survey has been retained.
Condition V.A.1		x			This PM standard of 0.05 grams(g) per dry standard cubic meter(dscm) has been retained. Additionally, this PM standard supersedes the hourly PM standard of 0.8 lb/hr for wet scrubber C5, 1.55 lb/hr for wet scrubber C41, and 0.064 lb/hr for wet scrubber C12. These hourly limits were originally calculated using the 0.05 g/dscm standard.
Condition V.A.2.(a)		x			This air pollution control equipment requirement has been retained.
Condition V.A.2.(b)		x			This air pollution control equipment requirement has been retained.
Condition V.A.3.(a)		x			This monitoring requirement has been retained.
Condition V.A.3.(b)		x			This monitoring requirement has been retained.
Condition V.A.3.(c)		x			This monitoring requirement has been retained.
Condition V.A.3.(d)		x			This monitoring requirement has been retained.
Condition V.A.4		x			This performance test requirement has been retained.
Condition V.B.1.(a)		x			This opacity standard has been retained.
Condition V.B.1.(b)		x			This opacity standard has been retained.
Condition V.B.2		x			This requirement to perform a monthly opacity survey has been retained.
Condition V.C.1.(a)		x			This air pollution control equipment requirement has been retained.
Condition V.C.1.(b)		x			This air pollution control equipment requirement has been retained.

Condition # in Permit No. 45670	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition V.C.2		x			This VOC standard has been retained.
Condition V.C.3.(a)		x			This air pollution control equipment requirement has been retained.
Condition V.C.3.(b)		x			This air pollution control equipment requirement has been retained.
Condition V.C.3.(c)		x			This air pollution control equipment requirement has been retained.
Condition V.C.4.(a)		x			This monitoring requirement has been retained.
Condition V.C.4.(b)		x			This monitoring requirement has been retained.
Condition V.C.5		x			This performance test requirement has been retained.

VII. MONITORING AND RECORD KEEPING REQUIREMENTS

A. Facility Wide

1. Along with the semiannual compliance certification, the Permittee is required to submit reports of all recordkeeping, monitoring and maintenance required by the permit.
2. The Permittee is required to maintain, on-site, records of the manufacturer's specifications or an Operation and Maintenance Plan for all pollution control equipment, fuel burning equipment, and internal combustion engines listed in the permit.

B. Metallic Mineral Processing Subject to R18-2-721

1. The Permittee is required to keep records of the daily process rate and hours of operation of all material handling facilities.
2. The Permittee is required to show compliance with the opacity standard in Attachment "B", Section II by having a Method 9 certified observer perform monthly surveys of visible emissions from the affected sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard or baseline opacity level. If a unit is not operating during a scheduled visual survey, the Permittee is not required to begin operating it for the sole purpose of the survey.
3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

4. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.
5. The Permittee is required to conduct quarterly black inspections of the baghouses.

C. Metallic Mineral Processing Subject to NSPS Subpart LL

1. The Permittee is required to operate a monitoring device to continuously measure the change in pressure of the gas stream through each operating scrubber. The Permittee must record this measurement weekly.
2. The Permittee is required to operate a monitoring device to continuously measure the scrubbing liquid flow rate to each operating scrubber. The Permittee must record this measurement weekly.
3. The Permittee is required to show compliance with the opacity standards in Attachment "B", Section III by having a Method 9 certified observer perform monthly surveys of visible emissions from the affected sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard or baseline opacity level. If a unit is not operating during a scheduled visual survey, the Permittee is not required to begin operating it for the sole purpose of the survey.
4. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
5. The Permittee is required to conduct quarterly black inspections of the baghouses.
6. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.
7. The Permittee must operate a thermocouple to continuously measure the temperature of the steam deoiler flare.

D. Non NSPS Fuel Burning Equipment and Portable Aggregate System

1. The Permittee is required to show compliance with the opacity standards in Attachment "B", Section IV and VI by having a Method 9 certified observer perform monthly surveys of visible emissions from the affected sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard. If a unit is not operating during a scheduled visual survey, the Permittee is not required to begin operating it for the sole purpose of the survey. The Permittee is not required to perform surveys of the Mine Area / Shop Heaters and SX/EW Heaters used to heat areas for the comfort of personnel.
2. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

3. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

D. Package Boiler

The Permittee is required to maintain either daily or monthly records of the fuel combusted in the boiler.

E. Unclassified Sources

1. The Permittee is required to operate a monitoring device to continuously measure the change in pressure of the gas stream through each operating scrubber. The Permittee must record this measurement weekly.
2. The Permittee is required to operate a monitoring device to continuously measure the scrubbing liquid flow rate to each operating scrubber. The Permittee must record this measurement weekly.
3. The Permittee is required to show compliance with the opacity standard in Attachment "B", Section VII by having a Method 9 certified observer perform surveys of visible emissions from the affected sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard. If a unit is not operating during a scheduled visual survey, the Permittee is not required to begin operating it for the sole purpose of the survey.
4. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
5. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.
6. The Permittee is required to conduct an annual blacklight inspection of the baghouses.

F. Internal Combustion Engines

1. The Permittee is required to keep a rolling 12-month total of hours of engine usage.
2. The Permittee is required to keep appropriate records in order to record daily the sulfur content and lower heating value of the fuel fired in each engine.
3. The Permittee is required to show compliance with the opacity standard in Attachment "B", Section VIII by having a Method 9 certified observer perform monthly surveys of visible emissions from the affected sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard. If a unit is not operating during a scheduled visual survey, the Permittee is not required to begin operating it for the sole purpose of the survey.
4. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and

observations.

5. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

G. Gasoline Dispensing Facilities

1. The Permittee is required to maintain records of the Reid pressure of the gasoline, dates of storage in the tank, and dates when the tank is empty.
2. The Permittee is required to keep records of monthly throughput of gasoline through each dispensing facility.

H. Fugitive Dust

1. The Permittee is required to keep record of the dates on which any of the dust control measures contained in Attachment "B", Conditions X.B.1.a.(3)(a) through X.B.1.a.(3)(h) are employed.
2. The Permittee is required to show compliance with the opacity standards in Attachment "B", Section X by having a Method 9 certified observer perform monthly surveys of visible emissions from fugitive dust sources. The observer is required to conduct a 6- minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.
3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
4. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

I. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

J. Periodic Activities

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.
2. The Permittee is required to record the date, duration, and quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.
3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

XI. TESTING REQUIREMENTS

- A. The Permittee is required to conduct biannual performance tests for PM₁₀ to demonstrate compliance with the multiple-unit hourly emission caps in Table 1 and 2 of Attachment

“B” Condition I. If the results of the performance test are 75% of a cap or greater, then that equipment must be tested every 12 months until the results of the performance test fall below 75% of the cap.

- B. The Permittee is required to perform a once per permit term performance test for PM on Scrubbers C12, M-VS and M-PS to demonstrate compliance with the 0.05 g/dscm NSPS Subpart LL emission limit.
- C. The Permittee is required to conduct biannual performance tests on the Grinding Line #5 Scrubber (C5) and the Secondary Satellite Crushing Plant Scrubber (C41) to demonstrate compliance with the 0.05 g/dscm NSPS Subpart LL emission limit. If the results of the performance test are 75% the limit or greater, then that unit must be tested every 12 months until the results of the performance test fall below 75% of the limit.
- D. The Permittee is required to conduct biannual performance tests for PM₁₀ on the Pressure Leach Vessel to demonstrate compliance with the 4.0 lb/hr limit under Operating Scenario 1. If the results of the performance test are 75% of the limit or greater, then the unit must be tested every 12 months until the results of the performance test fall below 75% of the limit. Once the Permittee begins operating under Operating Scenario 2, the Pressure Leach vessel becomes part of Emission Cap 5 and will be tested as part of that cap.
- E. The Permittee is required to perform initial Method 9 performance tests on new NSPS Subpart LL applicable emissions units.
- F. The Permittee is required to perform a once per permit term Method 25A/25B performance test for VOCs on the steam deoiler.

XII. INSIGNIFICANT ACTIVITIES

Table 6 lists insignificant activities conducted by the Permittee.

Table 6: Insignificant Activities

Tank #	Storage Tanks	Storage Volume (gallons)	Justification
2	Diesel Fuel #2	19,180	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
3	Oil T04 30	5,208	A.A.C. R18-2-101.57.j Emissions will be insignificant
4	Evergreen 68 (Oil)	1,200	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons and contents less volatile than diesel
5	Evergreen 68 (Oil)	1,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
32	Dust Suppressant (Oil Based)	12,837	A.A.C. R18-2-101.57.j Emissions will be insignificant
45	Ethyl Xanthate (18% in Solution)	2,642	A.A.C. R18-2-101.57.j Emissions will be insignificant
46	Test Chemical Mix Tank	2,642	A.A.C. R18-2-101.57.j Emissions will be insignificant

Tank #	Storage Tanks	Storage Volume (gallons)	Justification
48	Flocculant	2,642	A.A.C. R18-2-101.57.j Emissions will be insignificant
49	Drying Aid Reagent	470	A.A.C. R18-2-101.57.j Emissions will be insignificant
61	5 EP Oil	3,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
62	2 EP Oil	3,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
63	Ion Exchange Solution (45% Kerosene)	10,569	A.A.C. R18-2-101.57.j Emissions will be insignificant
64	Ion Exchange Solution (Currently Empty)	5,261	A.A.C. R18-2-101.57.j Emissions will be insignificant
68	Antiscalant	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
69	Ethyl Xanthate (18% in Solution)	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
70	Frother	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
71	Frother	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
72	Antiscalant	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
73	Tank for Test Chemicals	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
76	Moly Promotor	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
77	Moly Promotor	8,200	A.A.C. R18-2-101.57.j Emissions will be insignificant
78	Drying Aid Reagent	7,890	A.A.C. R18-2-101.57.j Emissions will be insignificant
81	DTE 24 Oil	300	A.A.C. R18-2-101.57.j Emissions will be insignificant
82	Used Motor Oil	300	A.A.C. R18-2-101.57.j Emissions will be insignificant
83	Diesel Fuel #2	300	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
84	Waste Safety Solvent	2,007	A.A.C. R18-2-101.57.j Emissions will be insignificant
89	Diesel Fuel #2	10,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
90	Diesel Fuel #2	554	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
92	Diesel Fuel #2	8,711	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
96	Sulfuric Acid	91,295	A.A.C. R18-2-101.57.j Emissions will be insignificant
97	Sulfuric Acid	91,295	A.A.C. R18-2-101.57.j Emissions will be insignificant

Tank #	Storage Tanks	Storage Volume (gallons)	Justification
98	Sulfuric Acid	91,295	A.A.C. R18-2-101.57.j Emissions will be insignificant
124	Diesel Fuel #2	10,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
125	Diesel Fuel #2	10,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
126	Diesel Fuel #2	20,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
127	Diesel Fuel #2	20,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
128	Diesel Fuel #2	20,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
129	Diesel Fuel #2	20,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
131	Waste Treated Water (50% Ethylene Glycol)	2,025	A.A.C. R18-2-101.57.j Emissions will be insignificant
132	Treated Water (50% Ethylene Glycol)	2,025	A.A.C. R18-2-101.57.j Emissions will be insignificant
133	Used Oil	4,489	A.A.C. R18-2-101.57.j Emissions will be insignificant
134	DTE 24 Oil	2,025	A.A.C. R18-2-101.57.j Emissions will be insignificant
135	Evergreen 68 (Oil)	4,225	A.A.C. R18-2-101.57.j Emissions will be insignificant
136	T04-50 (Oil)	5,155	A.A.C. R18-2-101.57.j Emissions will be insignificant
137	T04-30 (Oil)	4,489	A.A.C. R18-2-101.57.j Emissions will be insignificant
138	Evergreen 68 (Oil)	10,299	A.A.C. R18-2-101.57.j Emissions will be insignificant
139	Evergreen 68 (Oil)	2,000	A.A.C. R18-2-101.57.j Emissions will be insignificant.
140	Treated Water (50% Ethylene Glycol)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
141	Empty - Will hold oil	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
142	Empty - Will hold oil	2,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
143	T04-30 (Oil)	2,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
144	T04-50 (Oil)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
145	Used Oil	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
151	Diesel	20,000	A.A.C. R18-2-101.57.c Tank smaller than 40,000 gallons
152	Evergreen 68 (Oil)	2,000	A.A.C. R18-2-101.57.j Emissions will be insignificant

Tank #	Storage Tanks	Storage Volume (gallons)	Justification
153	Treated Water (50% Ethylene Glycol)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
154	Evergreen 68 (Oil)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
155	Empty - Will hold oil	2,000	A A.A.C. R18-2-101.57.j Emissions will be insignificant
156	T04-30 (Oil)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
157	T04-30 (Oil)	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
158	Used Oil	1,000	A.A.C. R18-2-101.57.j Emissions will be insignificant
159	Used Oil	10,035	A.A.C. R18-2-101.57.j Emissions will be insignificant
160	Used Oil	300	A.A.C. R18-2-101.57.j Emissions will be insignificant
161	Used Oil	300	A.A.C. R18-2-101.57.j Emissions will be insignificant
162	Safety Solvent	300	A.A.C. R18-2-101.57.j Emissions will be insignificant
163	Orfom SX-12 Diluent Tank	10,000	A.A.C. R18-2-101.57.j Emissions will be insignificant

LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
FMBI	Freeport-McMoRan Bagdad Inc.
g/dscm	Grams per Dry Standard Cubic Meter
HAPS	Hazardous Air Pollutants
MSDS	Material Safety Data Sheet
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NOC	Notice of Correction
NSPS	New Source Performance Standards
PLS	Pregnant Leach Solution
PM	Particulate Matter
PM ₁₀	Particulate Matter with an aerodynamic diameter less than 10 microns
PTE	Potential-to-Emit
SO ₂	Sulfur Dioxide
TPY	Tons per Year
VOC	Volatile Organic Compound