

**TECHNICAL SUPPORT DOCUMENT (TSD)**

**August, 2011**

**I. GENERAL COMMENTS:**

**A. Company Information**

Business Name: Rosemont Copper Company  
Facility Address: 12700 E. Greaterville Road  
Sonoita, Arizona 85637  
Mailing Address P.O. Box 35130, Tucson, AZ 85740-5130

**B. Background**

The Rosemont Copper Company (Rosemont) applied for an initial installation and operating permit on July 29, 2010. The permit was deemed administratively complete on November 30, 2010 after submittal of additional information following PDEQ's determination on that the application was incomplete. During the application review process PDEQ requested additional technical information to substantiate emission limits and clarify other information that Rosemont had submitted in their application. One of the primary reasons for requesting this information was to clarify whether Rosemont should have submitted an application as a Title V source. This permit is the initial five year permit issued to Rosemont. The facility is required to obtain an air quality permit due to potential emissions of regulated air pollutants, generated primarily from mining activities, exceeding the permitting thresholds. In addition, the facility is subject to New Source Performance Standards (NSPS) for Metallic Mineral Processing Plants (Part 60 Subpart LL) and Title 17 of the Pima County Code. This TSD supports the permit written as a result of the new source application.

**C. Correspondence Timeline**

The table below is a timeline of correspondence sent to and received from Rosemont during preparation of the draft permit. This correspondence addresses the permit application only.

<b>Correspondence</b>	<b>Date Submitted</b>
Class II Air Quality Permit Application	7/29/2010
Electronic Submittal of Permit Application	9/8/2010
Incomplete Application Letter to Rosemont	9/23/2010
Rosemont Response to Incomplete Application Letter	10/8/2010
PDEQ Administratively Complete Application Letter to Rosemont	11/30/2010
Rosemont Submittal of Draft Air Quality Permit to PDEQ	5/10/2011
PDEQ Request for Additional Information	5/12/2011
Rosemont Response to Additional Information Request	6/1/2011

**D. Attainment Classification**

This facility is located in a region that is currently designated as attainment for all criteria pollutants.

## II. FACILITY DESCRIPTION

This air quality operating permit is issued to Rosemont Copper Company, (Rosemont) a subsidiary of Augusta Resource Corporation, for its Rosemont Copper Project (RCP) which is located approximately 30 miles southeast of Tucson on State highway 83, Arizona. Projected to have an approximately 20-year operating life, the facility plans to operate an open-pit copper mine to include mining, drilling, blasting, milling, leaching, and solvent extraction/ electrowinning processes (SX/EW). The peak mining rate is projected to be 376,000 tons per day (tpd) of total material (ore and waste). The RCP will consist of two types of ore Copper Sulfide and Copper Oxide ores. The sulfide ore will be processed through crushing, grinding and flotation to produce a concentrate product whereas the oxide ore will be processed through leaching resulting in a leach solution further processed through a solvent extraction and electrowinning facility to produce a copper cathode product for the market.

The RCP is expected to produce annually 221M lbs of copper, 4.7M lbs of molybdenum, 2.4M ounces of silver and approximately 15k ounces of gold as a by-product over the life of the mine which is currently projected to have a mine operating life of 20 years. The peak mining rate is projected to be 376,000 tons per day (tpd) of total material (ore and waste).

Emissions from the facility will consist primarily of fugitive and non fugitive particulate matter (PM) from mining, unpaved roads and tailing operations, nitrogen oxide and carbon monoxide from portable and stationary combustion sources and volatile organic compounds from organic liquid storage activities. The facility plans to control fugitive emissions using a dust control program that will control emissions by a combination of methods including, but not limited to, retention of native vegetation, application of dust and erosion chemical suppressants, road watering etc. Non-fugitive emissions will be controlled through the use of or a combination of scrubbers, cartridge filter dust collectors, electrostatic precipitator(s) and baghouse(s). Specific equipment used to control emissions is outlined in the specific conditions found in Part B of the permit. Rosemont has proposed a synthetic emission limitation (SEL) to limit emissions below major source levels and therefore avoid a Title V permit.

The facility plans to operate 24 hours per day, 365 days per year except during routine maintenance, shutdown or repair of equipment.

### A. Process Description and Operating Hours

#### Open-Pit Mining, Crushing & Coarse Ore Storage

Drilling and blasting will occur followed by transportation of the ore to the primary crusher or Run-of-Mine (ROM) stockpile. Ore suitable for immediate heap leaching will be delivered directly to the leach pad. Haul trucks will deliver to a dump pocket above the primary crusher. Discharge from this operation will be sent to the coarse ore stockpile building which is covered. Coarse ore is conveyed from the coarse ore stockpile building by underground feeders to the semi-autogenous (SAG) grinding mill.

#### Secondary Crushing & Screening

#### Milling, Flotation and Dewatering

Ore is ground in water to a final product size in the SAG mill process. Secondary grinding and flotation follows

processing by the SAG mill to produce copper and molybdenum concentrate slurries, which are transported to the copper and molybdenum dewatering circuits respectively. Oversize ore is transported to the SAG oversize surge bin where the Pebble Crusher crushes the ore to the required nominal size and recirculates the crushed ore back to the SAG mill.

During the copper & molybdenum concentrate dewatering, water is removed and the slurries thickened and pumped to filters. In the copper circuit, the filtered cake is transported to the copper concentrate stockpile where it is placed in trucks for shipment to the market. In the Molybdenum process the cake is dried in the dryer and later packaged and shipped to the market.

### SX/ EW

The SX circuit will consist of a train of extraction settlers to transfer copper from the pregnant leach solution to an organic solution, followed by a strip settler to transfer the copper from the organic solution to the electrolyte. Each mixer-settler will consist of a series of mixing tanks to allow enough residence time where the aqueous stream and the organic stream are intimately contacted to permit the transfer of metal and acid between phases. The resulting mixture of organic and aqueous will be fed into a settler tank where the two phases will separate. Due to a lower specific gravity, the organic phase will rise to the top of the settler and constitute the entire top layer.

Loaded organic solution, which will be rich in copper, will be pumped to the strip mixer-settler. Here, lean electrolyte, partially depleted in copper after electrowinning, will be used to remove copper from the organic. Hydrogen ions will be transferred into the organic to replace the extracted copper. The now barren organic will then advance to the extraction settlers as described above

## **B. Air Pollution Control Equipment**

The following sections are identified within the air quality operating permit as including air pollution control equipment:

- Section 1 Primary Crusher and Coarse Ore Storage (3 Wet Scrubbers)
- Section 2 Pebble Crusher (1 Wet Scrubber)
- Section 3 Copper Concentrate Dewatering (2 Wet Scrubbers)
- Section 4 Molybdenum Concentrate Dewatering (1 Scrubber/ ESP & 1 Dust Collector)
- Section 6 Solvent Extraction & Electrowinning (SX/EW) (6 Wet Scrubbers)
- Section 8 Miscellaneous Sources (3 Lab Dust Collector & 1 Wet Scrubber)

## **III. REGULATORY HISTORY**

### **A. Testing & Inspections**

Testing will be performed on various equipment within 180 days of initial start-up of the RCP.

### **B. Permit Deviation Reports**

None as this will be a new source.

## **IV. EMISSION ESTIMATES**

**A. Facility Wide Estimates**

The following table of emission estimates submitted by Rosemont has been reviewed and approved by PDEQ.

The emission factors used to calculate the PTE estimates are based on voluntarily accepted synthetic emission limitations (SEL) and AP-42. Testing to be completed upon start-up will verify this estimates. PDEQ will adjust the PTE if necessary depending on the test results.

**Table I – Potential to Emit**

<b>Pollutant</b>	<b>Potential To Emit (Including Fugitives) (Tons per Year)</b>	<b>Potential To Emit (Non-Fugitive Emissions Only) (Tons per Year)</b>
Particulate Matter (as PM)	3180.03	88.06
Particulate Matter (as PM <sub>10</sub> )	908.02	66.62
Particulate Matter (as PM <sub>2.5</sub> )	121.51	29.03
Nitrogen Oxides (NO <sub>x</sub> )	170.58	16.76
Sulfur Oxides (SO <sub>x</sub> )	18.15	0.06
Carbon Monoxide (CO)	615.22	9.00
Volatile Organic Compounds (VOCs)	5.28	1.51
Hazardous Air Pollutants (HAPs)	3.37	3.37

Based on the facility throughput and PTE, the RCP, is a **Class II; Synthetic Minor Source** for PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and a true minor for all other regulated pollutants.

**V. APPLICABLE REQUIREMENTS**

**A. Code of Federal Regulations (CFR):**

- 40 CFR 60 Subpart LL Standards of Performance for Metallic Mineral Processing plants.
- 40 CFR 60 Subpart IIII Standards of Performance for Stationary Internal Combustion Engines.

**B. Pima County Code (PCC) Title 17, Chapter 17.16:**

Rosemont is also subject to local (Pima County) air pollution emission standards. The specific Pima County conditions applicable to Rosemont are identified below:

- 17.16.010 Local Rules and Standards – Applicability of More than One Standard
- 17.16.020 Noncompliance with Applicable Standards
- 17.16.040 Visible Emission Standards: Standards and applicability (Include NESHAP)
- 17.16.050 Visibility Limiting Standards
- 17.16.060 Fugitive Dust Producing Activities
- 17.16.090 Roads and Streets

17.16.100	Particulate Materials
17.16.110	Storage Piles
17.16.120	Mineral Tailings
17.16.165	Standards of Performance for Fossil-Fuel Fired Industrial and Commercial Equipment
17.16.360	Standards of Performance for Nonferrous Metals Industry Sources
17.16.430	Standards of Performance for Unclassified Sources
17.16.450	Off-Road Machinery
17.16.470	Roadway and Site Cleaning Machinery
17.16.490	Standards of Performance for New Stationary Sources

## VI. PERMIT CONTENTS

The following section of the TSD refers to the specific conditions of the permit and explains in detail why the permit was written as presented.

### A. Applicability:

The RCP is subject to Federal New Source Performance Standards (NSPS) namely Title 40, Code of Federal Regulations (CFR), Part 60, Subpart LL (Standards of Performance for Metallic Mineral Processing plants) and Subpart IIII (Standards of Performance for Stationary Internal Combustion Engines). The standards of performance are promulgated for the control of particulate matter (Subpart LL) and control of NMHC + NO<sub>x</sub>, CO & PM from stationary engines. These standards apply to new, modified or reconstructed facilities.

The provisions of Subpart LL apply to the following affected facilities at the RCP: Each crusher and screen in open-pit mines; each crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station and truck unloading station.

The NSPS Subpart LL identifies a stack emission limitation for particulate matter (PM). It also provides emission limits for fugitive dust emissions from affected facilities by limiting the opacity of fugitive dust emissions. Finally the rule requires periodic monitoring of devices used as PM emissions control devices. It also requires periodic monitoring for water sprays that are used to control fugitive PM emissions from wet scrubbers. In addition, PDEQ is requiring testing once every five years to assure that RCP is meeting the numeric limitations in the federal standards and permit.

EPA exempts wet material processing operations from the requirements of this standard but may be subject to other NSPS subparts. These processes as defined have no potential for PM emissions. Affected facilities under NSPS Subpart LL are those that commence construction or modification after August 24, 1982.

The provisions of Subpart IIII apply to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) that:

1. Commence construction or modify or reconstruct their engines after July 11, 2005 where the engines are:
  - a. Manufactured after April 1, 2006 and are not fire pump engines, or
  - b. Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.
2. The provisions of this subpart are not applicable to engines being tested at an engine test cell/stand.

The NSPS for Subpart III prescribes limits that have to be certified by the manufacturer for a specific period of time. After this period, Rosemont is required to assure compliance with those limits. Rosemont is required to purchase engines certified to these limits and maintain the engines as required by the manufacturer.

## **B. Emission Limitations and Standards:**

The specific emission limits and standards applicable to the RCP have been grouped by operation type and titled Sections. Each Section represents a particular process or operation at the facility. The Control Officer has (where possible) organized the specific conditions identified in each Section parallel to where the process/operation starts and ends.

### **Section 1: Primary Crusher and Coarse Ore Storage**

#### **Emission Group A**

The equipment identified within this group is generally stationary process equipment. Emissions from this group are subject to a local opacity standard or a more stringent fugitive standard identified in the NSPS Subpart LL. All fugitive and process fugitive emissions from the crushers and conveyor belts located immediately below the crushing surfaces are controlled with air pollution control devices including spray bars and wet scrubbers. Permit Conditions are directly from the NSPS. Where the NSPS lacks the appropriate conditions, additional monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

#### **Emission Group B**

The emissions from this equipment group are captured and released through a stack or chimney. All process stack sources at the facility encompass air pollution control (APC) equipment used to remove particulate matter by means of wet scrubbing. Rosemont has proposed and accepted SELs below the NSPS standard. A permit condition limiting emissions to this proposal is included in I.B.1 of Section 1. This condition is a federally enforceable conditions and cannot be exceeded unless Rosemont submits an application for and receives a revised final permit from PDEQ. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

The emission points (stacks) of APC equipment subject to the NSPS Subpart LL particulate matter and opacity limitations are identified within each emission group. Non NSPS equipment/processes are subject to local standards identified in Title 17 of the Pima County Code (PCC).

#### **Emission Group C**

The emissions from this equipment group are those that are not collected by a capture system. The predominant source of such fugitive emissions is from material handling operations. An opacity standard associated with process fugitive and fugitive sources is common to all new sources subject to NSPS Subpart LL. This opacity standard is 10 %. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

## **Section 2: Pebble Crusher**

### **Emission Group A**

The equipment identified within this group is generally stationary process equipment. Emissions from this group are subject to a local opacity standard or a more stringent fugitive standard identified in the NSPS Subpart LL. All fugitive and process fugitive emissions from the crusher and conveyor belts located immediately below the crushing surfaces are controlled with air pollution control devices including spray bars and wet scrubbers. These methods are also used to control emissions from the bins and screens. Permit Conditions are directly from the NSPS. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

### **Emission Group B**

The emissions from this equipment group are captured and released through a stack or chimney. All process stack sources at the facility encompass air pollution control (APC) equipment used to remove particulate matter by means of wet scrubbing. Rosemont has proposed and accepted SELs below the NSPS standard. A permit condition limiting emissions to this proposal is included in I.B.1 of Section 2. This condition is a federally enforceable condition and cannot be exceeded unless Rosemont submits an application for and receives a revised final permit from PDEQ. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping commensurate with the activity or process has been included in the permit to assure compliance with the Emission Limitations and Standards.

The emission points (stacks) of APC equipment subject to the NSPS Subpart LL particulate matter and opacity limitations are identified within each emission group.

## **Section 3: Copper Concentrate Dewatering**

### **Emission Group A**

The emissions from this equipment group are captured and released through a stack or chimney. All process stack sources at the facility encompass air pollution control (APC) equipment used to remove particulate matter by means of wet scrubbing. Rosemont has proposed and accepted SELs below the NSPS standard. A permit condition limiting emissions to this proposal is included in I.A.1 of Section 3. This condition is a federally enforceable condition and cannot be exceeded unless Rosemont submits an application for and receives a revised final permit from PDEQ. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping commensurate with the activity or process has been included in the permit to assure compliance with the Emission Limitations and Standards.

The emission points (stacks) of APC equipment subject to the NSPS Subpart LL particulate matter and opacity limitations are identified within each emission group.

### **Emission Group B**

The emissions from this equipment group are those that are not collected by a capture system. The predominant source of such fugitive emissions is from material handling operations. An opacity

standard associated with process fugitive and fugitive sources is common to all new sources subject to NSPS Subpart LL. This opacity standard is 10 %. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

#### **Section 4: Molybdenum Concentrate Dewatering**

##### **Emission Group A**

The emissions from the Molybdenum Concentrate Dewatering operations are collected by a capture system. The potential source of these emissions is from molybdenum drying and material transfer points. An opacity standard associated with process fugitive and fugitive sources is common to all new sources subject to NSPS Subpart LL. This opacity standard is 10 %. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping conditions commensurate with the activity or process have been included in the permit to assure compliance with the Emission Limitations and Standards.

##### **Emission Group B**

The emissions from this equipment group are captured and released through a stack or chimney. All process stack sources at the facility encompass air pollution control (APC) equipment used to remove particulate matter by means of wet scrubbing. Rosemont has proposed and accepted SELs below the NSPS standard. A permit condition limiting emissions to this proposal is included in I.B.1.a of Section 4. This condition is a federally enforceable condition and cannot be exceeded unless Rosemont submits an application for and receives a revised final permit from PDEQ. Where the NSPS lacks the appropriate conditions, monitoring, testing and recordkeeping commensurate with the activity or process has been included in the permit to assure compliance with the Emission Limitations and Standards.

The emission points (stacks) of APC equipment subject to the NSPS Subpart LL particulate matter and opacity limitations are identified within each emission group..

#### **Section 5: Mine Activities**

The Permittee is required to submit a Dry Stack Tailings Management Plan (DSTMP) and a Fugitive Dust Management Plan (FDMP) no later than 180 days (6 months) after issuance of the final permit. This will allow PDEQ to review the plan and correspond with Rosemont and finalize the management plans that assure compliance with Pima County Code fugitive dust regulations, property boundary lines and opacity limitations. The Permittee will be required to review and evaluate the DSTMP annually to determine the effectiveness in controlling dust from the dry stack tailings. Should the annual review show that the DSTMP is ineffective in controlling dust, Rosemont is required to submit revisions to the plan outlining changes to be implemented that show improved compliance over the previous year. The Rosemont may employ methods above what is required by Pima County Code or accepted management practices for controlling dust.

##### **General Fugitive Standards**

The emissions from equipment identified within this section are not collected by a capture system. The predominant sources of such emissions are fugitive that arise from material handling operations, wind erosion and maintenance operations (demolition/renovation).

The general fugitive standards applicable to Rosemont are identified with reference to Pima County Code.

### **Dry Stack Tailings**

The potential fugitive emissions from the dry stack tailings are required to be controlled to prevent excessive amounts of particulate matter from becoming airborne. Rosemont is required to follow a DSTMP approved by the Control Officer to provide adequate air pollution control.

### **Vehicles on Unpaved Surfaces**

Rosemont is required to control the potential fugitive emissions from vehicles on unpaved roads to the extent that the emissions do not diffuse beyond the property boundary. The FDMP addresses dust control in these areas. Effective control measures include but are not limited to: limiting vehicular speeds, maintaining the road surface and if possible covering stock loads in open bodied trucks (where practicable).

### **Other Fugitive Dust Sources**

Rosemont is required to include in the FDMP control of fugitive dust from all other fugitive dust producing sources. These sources include but are not limited to drilling, blasting, truck dumping, grading and other activities.

### **Demolition and Renovation**

Rosemont shall comply with all the requirements of 40 CFR 61, Subpart M (National Emission Standards for Hazardous Air Pollutants) – Asbestos. The asbestos regulation covers many sources of asbestos including demolition and renovation of structures.

## **Section 6: Solvent Extraction & Electrowinning (SX/EW)**

### **Emission Group A**

The equipment identified within this group is stationary process equipment used in extracting copper from the liquid solution. Emissions from this process will entirely fugitive emissions and originate from the organic phase of the SX process. The emissions will potentially be VOCs and HAPs. Rosemont is required to cover all tanks to minimize evaporation of these pollutants. The EW process emissions will mainly be H<sub>2</sub>SO<sub>4</sub> emissions with trace amounts of cobalt compounds contained in the acid mist. Suppressing agents and ventilation scrubbers will be used to control these pollutants. This Emission Group is subject to PCC 17.16.430 'Standards of Performance for Unclassified Sources'.

### **Emission Group B**

The emissions from this equipment group are captured and released through a stack or chimney. All process stack sources at the facility encompass air pollution control (APC) equipment used to remove particulate matter by means of a dry dust collectors or wet scrubbing.

## **Section 7: Combustion Processes**

The combustion equipment identified within this section has the potential to emit significant quantities of regulated air pollutants. However since this equipment are diesel fired emergency generators or fire pump engines subject to NSPS Subpart IIII, operation is limited to emergency use only and a 100 hour per year limitation on maintenance and testing. The EPA has established conditions that apply to these engines. PDEQ has extracted those conditions that apply to the RCP and included those in the permit.

**Operational Limitation:**

Prohibition from operating affected stationary rotating machinery in excess of the allowable hours of operation in any 12-consecutive month period.

**Opacity:**

The Permittee cannot allow any equipment under his control to emit effluents (such as exhaust from a generator) that exceed specific values of opacity (the degree to which light cannot pass through the plume of effluent/exhaust.) The Permittee demonstrates compliance with this regulation by checking the exhaust from the emergency generator under his control quarterly, and keeping complete records of these checks.

**Fuel Limitation:**

The Permittee is prohibited from firing fuels other than those allowed by the permit. This is a material permit condition as alternate fuels may result in an increase in emissions for this group of equipment to above major source thresholds.

**Section 8: Miscellaneous Sources**

The equipment identified within this group is stationary process equipment used to add lime during the copper producing process. Emissions from this process will mostly be particulate matter fugitive emissions and are controlled by vents on the bins and silos. Emission Group A is subject to PCC 17.16.430 'Standards of Performance for Unclassified Sources'. Emission Group B has proposed and accepted SELs by Rosemont. A permit condition limiting emissions to this proposal is included in I.B.1 of Section 8. This condition is a federally enforceable condition and cannot be exceeded unless Rosemont submits an application for and receives a revised final permit from PDEQ.

**Section 9: Storage Tanks**

The Permittee has various storage tanks onsite that store product used in various processes. Tanks of note are the diesel storage, Sodium Akylmonothiophosphate, Methyl isobutyl Carbinol tanks. These tanks are subject to PCC 17.16.430 'Standards of Performance for Unclassified Sources'.

**Section 10: Mobile Sources**

The Permittee has various mobile sources onsite that are subject to Pima County Code. The Permittee is required to show compliance with local regulations limiting emissions from these operations as prescribed in section 9 of the permit.

**C. Monitoring Requirements:**

The specific monitoring requirements identified within the permit are presented in Table II below.

**Table II – Monitoring Requirements**

Part B Section	Emission Group	Specific Condition	Description of Permit Content	
1	A	II.A	<p><u>Opacity Checks and Measurements incl. Fugitive Dust</u></p> <p>Requirement to demonstrate compliance with the federal and local opacity standards by periodically monitoring the emissions from the equipment group every two weeks. The frequency of monitoring is to assure that RCP is complying with the opacity standards. When operating as required there should be minimal emissions from these processes. As a result only checks and not Method 9 opacity observations will currently required. Opacity measurements will be required when there seems to be a violation of an opacity standard. The Permittee is required to monitor emissions only when equipment or the process is in normal operating mode. This prevents the Permittee from monitoring emissions when equipment and processes are not running and recording that as fulfilling a monitoring requirement.</p>	
1	B	II.B.3-8		
1	C	II.C.1-6		
2	A	II.A.2-6		
2	B	II.B.3-8		
3	A	II.A.3-8		
3	B	II.B.2-6		
4	B	II.A.1-5		
4	C	II.B.3-7		
5	A	II.B.1 & 6-8		
8	A	II.A-E		
7	B	II.A.2.c & II.B		<p><u>Opacity Standard</u></p> <p>The Permittee demonstrates compliance with this regulation by checking the exhaust from the emergency generator quarterly, and keeping complete records of these checks. This monitoring condition is only a federally enforceable condition for II.A.2.c.</p>
7	A	I.A.4 & I.B.1		<p><u>Fuel Limitation</u></p> <p>Each type of fuel burned in equipment powered by combustion has a unique blend of constituents. When burned, each fuel results in the release of regulated pollutants to the atmosphere at characteristic levels. This permit is written to account for only the fuel specified in Section 7 of the permit. Use of fuels other than those specified would result in different rates of pollutant emission. Therefore, the Permittee must only burn the designated fuel specified in Section 7 of the permit to remain in compliance with the conditions of this permit. This monitoring condition is a federally enforceable condition for I.A.4 and locally enforceable for I.B.1.</p>

Part B Section	Emission Group	Specific Condition	Description of Permit Content
1	B	I.B.1	<p><u>Rosemont Proposed &amp; NSPS Particulate Matter Standard</u></p> <p>The permit conditions identified for this emission group are applicable to all affected sources subject to the NSPS subpart. These conditions are federal enforceable and include the requirement preventing the discharge of particulate matter above the SEL proposed by Rosemont. Compliance with this discharge standard shall be deemed compliance with the NSPS subpart limiting the discharge of particulate matter to below 0.05 grams per dry standard cubic meter (0.02 g/dscm).</p> <p>The NSPS also requires the installation, calibration and maintenance of a monitoring device on all applicable wet scrubbing emission control devices. These air pollution control devices are subject to a local only enforceable opacity limitation which shall be monitored biweekly.</p> <p>The above is valid for all APC except for the APC in Section 8. Even though Rosemont has proposed to limit emissions to the NSPS standard of 0.05 g/dscm, the APC is not subject to NSPS as it is not an affected facility under 40 CFR 60.380(a). Rosemont can however propose this SEL for the APC at the laboratory. The limit will be federally enforceable but the equipment is not subject to the NSPS Subpart LL.</p>
2	B	I.B.1	
3	A	I.A.1	
4	B	I.B.1.a	
8	B	I.B.1	
5	A	II.A.1	<p>Requirement for Rosemont to follow an approved DSTMP &amp; FDMP. As discussed previously, the DSTMP &amp; FDMP are required to contain monitoring methods, measures and dust reducing activities that Rosemont will employ to reduce or prevent excessive dust from becoming airborne and if airborne to ensure that either the opacity standard is not exceeded or the emissions do not cross property boundary lines. Emissions that cross property boundary lines are a violation whether or not the opacity limit is exceeded.</p>
5	A	II.A.2	<p>In addition, PDEQ is requiring a yearly review of the DSTMP by Rosemont in order to determine its effectiveness in controlling dust. The annual review shall take into account past dry stack tailings compliance issues, resolved/ unresolved including complaints reported to PDEQ and propose how those issues can be avoided in the future. Recommendations or stricter requirements will be prescribed by PDEQ should Rosemont's annual review show that changes are required but not proposed by Rosemont.</p>

**D. Facility Changes:**

The Permittee retains the ability to modify operations at the facility. However, the permit covering the facility must reflect the current state of operations *at all times*. Therefore, provisions have been made in the Pima County Code to allow changes in operating permits to reflect new facility conditions. The proper procedure must be followed when making certain modifications to the facility, and the permit. See the rules referenced in the permit for enumeration of these requirements.

**E. Alternate Operating Scenarios:**

As part of the normal operations, the RCP facility does not propose to have alternate operating scenarios that would trigger a different set of applicable requirements.

**F. Miscellaneous Comments**

None

**VIII. IMPACTS TO AMBIENT AIR QUALITY**

None required as the source is not subject to PSD or NSR as it is not a major source.

**X. CONTROL TECHNOLOGY DETERMINATION**

No control technologies needed to be determined. This facility is in an area of attainment and is not a new source.

**XI. PREVIOUS PERMIT CONDITIONS**

None, new source

**XII. INSIGNIFICANT ACTIVITIES**

Rosemont submitted an insignificant activities list in the application. PDEQ has incorporated portions of the list that may seem to contribute to air pollution but are deemed insignificant by PCC. PDEQ has excluded activities submitted in the application that are part of normal employee operations or are highly unlikely to be considered a source of pollution. These include activities such as kitchen use, smoking areas and rest-room related activities.

**EPA APPLICABILITY DETERMINATION INDEX**

**DETERMINATION DETAIL**

**CONTROL 050092**

Category : NSPS  
Subparts: Part 60, LL  
Date: 06/27/2002  
Title: Waiver of Visible Emission Test Requirements

Abstract:

EPA waives the NSPS Subpart LL requirement to conduct visible emissions tests on each of the fugitive emission sources located inside the facility because the results of EPA Method 22 observations conducted on the exterior of the building provide adequate assurance of compliance for the facilities located inside.

PDEQ has adopted this determination detail to exclude the Rosemont, from conducting EPA Method 9 visible emissions observations on affected facilities located within a building. Rosemont is required to demonstrate compliance with the opacity limitation by monitoring the emissions from the exterior of the buildings housing the crushers, feeders, conveyors and double deck screens.

PROPOSED TSD