



Sierrita Operations

173052

December 21, 2007

RETURN RECEIPT REQUESTED

CERTIFIED MAIL: 7006 2150 0004 3614 1897

Ms. Nancy Wrona
Director, Air Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

RE: Minor Permit Revision for the Replacement of a Secondary Crusher and Installation of a Cartridge-Type Dust Collector; Phelps Dodge Sierrita Inc., Permit #M190699P2-99

Dear Ms. Wrona:

Phelps Dodge Sierrita, Inc., d/b/a Freeport-McMoRan Copper and Gold - Sierrita Operations (Sierrita), is submitting the enclosed minor permit revision application in accordance with Arizona Administrative Code (A.A.C.) R18-2-319. As discussed with ADEQ staff, Sierrita plans to replace one secondary crusher in the Sierrita fine crushing plant and the install a FARR cartridge-type dust collector, which will collect emissions from the replacement secondary crusher and other equipment in the secondary crushing line. The FARR cartridge-type dust collector is designed with filters that are rated at 99.999% efficiency and therefore emissions from the replacement secondary crusher and related equipment will be de minimis. In addition, because cleaned air from the cartridge-type dust collector will be vented inside the fine crushing plant, there will be no emissions vented to the ambient air.

Description of Proposed Changes

Ore is introduced into the Sierrita fine crushing plant from the coarse ore stockpile using four belt lines consisting of two apron feeders and one reclaim conveyor belt each. Each reclaim conveyor belt delivers ore to a scalping screen. The scalping screen separates ore by size and delivers oversize to a secondary crusher; midsize to the 7A Belt, which transfers ore ultimately to the tertiary crushing circuit; and undersize to the 8A Belt, which bypasses the crushing circuit and delivers fine ore through a series of conveyor belts to the Sierrita mills. Oversize ore is crushed in the secondary crusher and exits through a discharge screen. Oversize from the discharge screen is delivered to the 7B Belt, which transfers ore ultimately to the tertiary crushing circuit. Undersize from the discharge screen is delivered to the 8B conveyor, which delivers fine ore to the Sierrita mills. Please see Attachments 1 and 2 for process flow diagrams of the fine crushing plant.

The four Sierrita secondary crushers are Allis-Chalmers Hydrocone crushers. As proposed in the Title V Renewal Application submitted by Sierrita on December 21, 2006, Sierrita plans to replace all of the Allis-Chalmers crushers (secondary and tertiary crushers) with either Svedala H-8000 or Sandvik H-8800 crushers due to an increasing scarcity of spare parts for the Allis-Chalmers crushers, which are no longer manufactured. (The Sandvik H-8800 is the same crusher as the Svedala H-8000 but has been re-designated after a change in company ownership). The H-8000/H-8800 has been proven in the Sierrita fine crushing plant as a tertiary crusher. To finalize the engineering plans for the replacement of the

secondary crushers, Sierrita must now determine whether the H-8000/H-8800 crusher will perform as expected as a secondary crusher.

Sierrita proposes to replace one Allis-Chalmers secondary crusher with a Sandvik H-8800 crusher to determine whether it will be capable of crushing the oversize material into secondary product. If the crusher performs as expected, it will remain in place and engineering plans for the replacement of the remaining three crushers will be finalized. Although the H-8000/H-8800 crushers have a slightly higher horsepower (and can theoretically crush slightly more material than Allis-Chalmers crushers), the Sierrita fine crushing plant is limited by tertiary crushing capacity, and therefore replacement of a secondary crusher will not result in an increase of ore throughput in upstream or downstream sources.

Currently, emissions from the four secondary crushers and associated discharge screens, the apron feeders and reclaim conveyor belts, and the drop points from the screens to the 7B, 8A and 8B belts are controlled by the "six-pack" wet scrubbers (Source IDs 002-007). Emissions from the four scalping screens are currently controlled by the No. 10 Wet Scrubber (Source ID 075). Sierrita proposes to install a new FARR cartridge-type dust collector to collect emissions from the entire No. 2 secondary crushing line from the coarse ore stockpile to final secondary disposition, which will include the following sources: No. 2 Apron Feeders, No. 2B Coarse Ore Reclaim Conveyor Belt, No. 2 Scalping Screen, No. 2 Secondary Crusher and Discharge Screen (pick up is located at the discharge screen), 7B Conveyor (drop from No. 2 Secondary Discharge Screen oversize), 8A Conveyor (drop from No. 2 Scalping Screen undersize), and 8B Conveyor (drop from No. 2 Secondary Crusher Discharge Screen undersize). Routing emissions from the entire No. 2 secondary crushing line to one associated dust collector will simplify dust collection in the area and improve efficiency due to a significant decrease in duct work.

Change in Emissions of Regulated Air Pollutants

The proposed FARR cartridge-type dust collector is designed with filters that are rated at 99.999% efficiency on 0.5 microns and larger particles. Particulate matter testing on identical FARR cartridge-type dust collectors at a similar facility resulted in emissions of 0.0004 grains/dscf. At 40,000 acfm this equates to de minimus emissions of 0.60 tons PM per year. Furthermore, because cleaned air from the dust collector will be routed inside the fine crushing building, there will be no emissions vented to the ambient air.

In addition, Sierrita anticipates that actual emissions of particulate matter from the fine crushing plant will be reduced because one scalping screen is being removed from the No. 10 wet scrubber (one fourth of the grain loading to this scrubber) and multiple sources will be removed from the "six-pack" wet scrubbers as described above.

Regulatory Requirements

The replacement secondary crusher will be subject to existing requirements under 40 CFR Part 60, Subpart LL (Standards of Performance for Metallic Mineral Processing Plants) in Section III of Sierrita Title V Permit No. M190699P2-99.

Pursuant to A.A.C. R-18-2-319(A), minor permit revision procedures may be used only for those changes at a source that satisfy eight requirements. Each of those requirements is addressed below.

1. *The proposed changes must not violate any applicable requirements.*

The replacement of one secondary crusher in the Sierrita fine crushing plant and installation of a FARR cartridge-type dust collector which will vent indoors will not violate any applicable requirements.

2. *The changes must not involve substantive changes to existing monitoring, reporting, or recordkeeping requirements in the permit.*

No changes to existing monitoring, reporting, or recordkeeping requirements in the permit are proposed in this application.

3. *The changes must not require or change a case-by-case determination of an emission limitation or other standard, or a source specific determination of ambient impacts, or a visibility or increment analysis.*

Because the potential emissions increase from the proposed project will not be “significant” as defined in A.A.C. R18-2-101(104), New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permitting are not required for this project. Consequently, the proposed project will not require or change a case-by-case determination of emission limitations, ambient air impacts determinations, or visibility or increment analyses.

4. *The changes must not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject.*

The proposed project does not seek to establish or change any permit term or condition for which there is no corresponding underlying applicable requirement. No emission limitations or other permit conditions have been proposed in order to avoid requirements which would otherwise apply.

5. *The changes must not be modifications under any provision of Title I of the Clean Air Act.*

The proposed changes are not “modifications” under Title I of the Clean Air Act (i.e., a “major modification” subject to major NSR/PSD or a “modification” subject to the NSPS.)

6. *The proposed revisions must not involve changes in fuels not represented in the permit application or provided for in the permit.*

No fuel changes are included in the proposed project.

7. *The increase in the source’s potential to emit any regulated air pollutant must not be significant as defined in A.A.C. R18-2-101.*

As shown above, the increase in potential emissions of regulated pollutants will not be “significant” as defined under A.A.C. R18-2-101(104).

8. *The changes must not require processing as a significant revision under A.A.C. R18-2-320.*

As demonstrated in #1 through #7 above, the proposed project meets the requirements for processing as a minor permit revision. The proposed project does not require a significant change in existing monitoring permit terms or conditions or a relaxation of reporting or recordkeeping permit terms or conditions. Furthermore, the proposed project does not constitute a modification to a major source of federally listed hazardous air pollutants, or reconstruction of a source, process, or production unit under Section 112(g) of the Clean Air Act. Accordingly, the project does not require processing as a significant permit revision under A.A.C. R18-2-320.

Please contact me at (520) 648-8866 if you have any questions concerning this submittal. Thank you for your timely review of the permit application.

Sincerely,

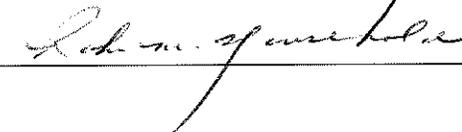


Sherry Burt-Kested
Sr. Environmental Engineer

Attachments

CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

I certify that to the best of my knowledge, based on information and belief formed after reasonable inquiry, that the statements made in the minor permit revision application, and draft revised operating permit are true, accurate, and complete. I further certify that the proposed project meets the criteria for use of minor permit revision procedures and hereby request that the procedures be used

Signature of Responsible Official: 

Title of Signer: General Manager

Typed or Printed Name of Signer: for John Broderick

Date: 12/21/07

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
3033 N. Central Ave. □ Phoenix, AZ 85012-2809-33 □ Phone: (602) 207-2338

STANDARD PERMIT APPLICATION FORM
(As required by A.R.S. 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to: (Business License name of organization that is to receive permit) _____
Phelps Dodge Sierrita, Inc.
2. Mailing Address: P. O. Box 527
City: Green Valley State: Arizona ZIP: 85622-0527
3. Previous Company Name: (if applicable)
 NA
4. Name (or names) of Owners/Principals: John Broderick
FAX #: 520.648.8573 Phone: 520.648.8500
5. Name of Owner's Agent:

FAX #: _____ Phone: _____
6. Plant/Site manager/Contact Person and Title: Sherry Burt-Kested, Sr. Environmental Engineer
7. Plant Site Name: Phelps Dodge Sierrita Inc.
Plant Site Location/Address: Sierrita Property, 6200 West Duval Mine Road
City: Green Valley County: Pima ZIP: 85614
Indian Reservation (if applicable, which one): NA
Latitude/Longitude, Elevation: 31°52'30" / 111° 06', 3700 ft. elevation
8. Equipment Purpose: Crushing of ore and associated pollution control equipment
Equipment List/Description: See attached listing of equipment.
9. Type of Organization:
 Corporation Individual Owner
 Partnership Government Entity (Government Facility Code: _____)
 Other _____
10. Permit Application Basis: New Source **Revision** Renewal of Existing Permit
(Check all that apply.) Portable Source General Permit
For renewal or modification, include existing permit number (and exp. date): M190699P2-99 as amended by Significant Permit Revision No. 35636 (6/24/07)
Date of Commencement of Construction or Modification: approximately January 18, 2007
Is any of the equipment to be leased to another individual or entity? Yes **No**
Standard Industrial Classification Code: 1021 State Permit or Class: I
11. Signature of Responsible Official of Organization: *Robert M. Yonke*
Official Title of Signer: General Manager
12. Typed or Printed Name of Signer: for John Broderick
Date: 12/21/07 Telephone Number: 520.648.8500

COMPANY NAME: Helps Dodge Sierrita Inc.
 EMISSION SOURCES

Estimated "Potential to Emit" per R18-2-101
 Review of applications and issuance of permits will be expedited by supplying all necessary information on this Table

REGULATED AIR POLLUTANT DATA			EMISSION POINT DISCHARGE PARAMETERS											
EMISSION POINT NUMBER	EMISSION POINT NAME	CHEMICAL COMPOSITION OF TOTAL STREAM	R. AIR POLLUTANT EMISSION RATE		UTM COORDINATES OF EMISSION PT. (5)			STACK SOURCES (6)			NONPOINT SOURCES (7)			
			#/ HR. (3)	TONS/YEAR (4)	ZONE	EAST (Mtrs)	NORTH (Mtrs)	HEIGHT ABOVE GROUND (feet)	HEIGHT ABOVE STRUC. (feet)	DIA. (ft.)	VEL. (fps.)	TEMP. (°F)	LENGTH (ft.)	WIDTH (ft.)
			0.137	0.6	12	490	3526	N/A						
	No. 2 Secondary Crusher	PM	0.137	0.6	12	490	3526							

GROUND ELEVATION OF FACILITY ABOVE MEAN SEA LEVEL 3700 feet.
 ADEQ STANDARD CONDITIONS ARE 293K AND 101.3 KILOPASCALS (A.A.C. R18-2-101)

- General Instructions:
- Identify each emission point with a unique number for this plant site, consistent with emission point identification used on plot plan, previous permits, and Emissions Inventory Questionnaire. Include fugitive emissions. Limit emission point number to (8) character spaces. For each emission point use as many lines as necessary to list regulated air pollutant data. Typical emission point names are: heater, vent, boiler, tank, reactor, separator, baghouse, fugitive, etc. Abbreviations are O.K.
 - Components to be listed include regulated air pollutants as defined in R18-2-101. Examples of typical component names are: Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Sulfur Dioxide (SO₂), Volatile Organic Compounds (VOC), particulate matter (PM), particulate less than 10 microns (PM₁₀), etc. Abbreviations are O.K.
 - Pounds per hour (#/HR) is maximum potential emission rate expected by applicant.
 - Tons per year is annual maximum potential emission expected by applicant, which takes into account process operating schedule. As a minimum applicant shall furnish a facility plot plan as described in the filing instructions. UTM coordinates are required only if the source is a major source or is required to perform refined modeling for the purpose of demonstrating compliance with ambient air quality guidelines.
 - Supply additional information as follows if appropriate:
 - Stack exist configuration other than a round vertical stack. Show length and width for a rectangular stack. Indicate if horizontal discharge with a note.
 - Stack's height above supporting or adjacent structures if structure is within 3 "stack height above the ground" of stack.
 - Dimensions of nonpoint sources as defined in R18-2-101.

Please note that the PTE values provided on this form are for information purposes only. The PTE values presented are not permit limitations. Additionally, the PTE values presented are the maximum potential to emit resulting from the changes described in this permit application.

**Phelps Dodge Sierrita, Inc.
 Emission Source Equipment List**

ID	EQUIPMENT NAME	CAPACITY	YEAR OF MANU/ INSTALLATION	NSPS (Y/N)	MATERIAL HANDLING FACILITY	MAKE, MODEL, SIERRITA ID #
<i>SECTION IV: FINE ORE CRUSHING – SECONDARY AND TERTIARY CRUSHING (REQUIREMENTS IN SECTION III)</i>						
#2 Secondary Crushing Line						
202	#2 Coarse Ore Reclaim Belt (Apron Feeder)	2000 tph	1968	N	N	
	#2 Coarse Ore Reclaim Feeders (2 Feeders – North and South)	1200 tph	1968	N	N	Stephen-Adamson 48' Apron Feeders
	#2 Scalping Screen	1422.5 tph	2007	Y	N	Ludowici Innovative 10'x20' DD
	8A Conveyor Belt (emissions pick-up on belt from #2 Scalping Screen)		1968	Y	N	
	#2 Secondary Crusher (emissions pick-up from discharge screen)	1422.5 tph	2008	Y	N	Svedala/Sandvik H8800 Crusher
	#2 Secondary Discharge Screen	1422.5 tph	1993	Y	N	Allis Mineral Systems 8' x 16'
	7B Conveyor Belt (emissions pick-up from #2 Secondary Discharge Screen)					
	8B Conveyor Belt (emissions pick-up on belt from #2 Secondary Discharge Screen)			1968	Y	N
#2 Secondary Dust Collector – Vented Indoors	40,500 acfm		2008	Y	N	FARR Cartridge-Type Dust Collector Vented Indoors

MINOR PERMIT REVISION AIR QUALITY CONTROL PERMIT

(As required by Title 49, Chapter 3, Article 2, Section 49-426 Arizona Revised Statutes)

This air quality control permit does not relieve applicant for meeting all air pollution regulations.

1. REVISION TO BE ISSUED TO (Business License Name of Organization that is to receive permit:
Phelps Dodge Sierrita Inc.

2. NAME (OR NAMES) OF OWNER OR PRINCIPALS DOING BUSINESS AS THE ABOVE ORGANIZATION:
Phelps Dodge Sierrita Inc.

3. MAILING ADDRESS P.O. Box 527
Green Valley Arizona 85622
CITY OR COMMUNITY STATE ZIP

4. ORIGINAL EQUIPMENT LOCATION ADDRESS Sierrita Property -
6200 W Duval Mine Road
Green Valley Arizona 85614
CITY OR COMMUNITY STATE ZIP

5. FACILITIES OR EQUIPMENT DESCRIPTION: This permit allows the replacement of the No. 2 Secondary Crusher and Installation of a FARR cartridge-type dust collector which will collect emissions from the replacement crusher and be vented indoors.

6. THIS REVISION ISSUED SUBJECT TO THE FOLLOWING Conditions contained in Operating Permit # M190699P2-99 as amended by Significant Permit Revision No. 35636.

7. ADEQ PERMIT NUMBER # M190699P2-99 as amended by Significant Permit Revision No. 35636. PERMIT CLASS I

EXPIRATION DATE: June 24, 2007

REVISION ISSUED THIS _____ DAY OF _____ 2006

Director, Air Quality Division

SIGNATURE

TITLE

MINOR PERMIT REVISION DESCRIPTION

This minor permit revision for Phelps Dodge Sierrita Inc. permits the replacement of the No. 2 Secondary Crusher and installation and operation of a FARR cartridge-type dust collector. The dust collector will collect emissions from the replacement secondary crusher as well as other sources in the No. 2 secondary crushing line as listed in Attachment C – Equipment List. Cleaned air from the dust collector will be routed inside the fine crushing building, therefore there will be no emissions vented to the ambient air.

Pursuant to Arizona Administrative Code, Title 18, Chapter 2, Section 101.97 (A.A.C. R18-2-101.97) the potential emission increase from the installation and operation of this equipment is less than significant. This equipment will be operated in accordance with the provisions of the A.A.C. R18-2-721 and Section III of Operating Permit No. M190699P2-99 as amended by Significant Permit Revision No. 35636 and the following provisions:

Attachment B, Section III.D.1 shall be modified as follows: "For Equipment Marked 'N' in the NSPS column of Attachment C: At all times, including periods of startup, shutdown and malfunction, Permittee shall, to the extent practicable, maintain and operate the secondary and tertiary crushing circuits and the associated **air pollution control equipment** in a manner consistent with good air pollution control practices for minimizing particulate matter emissions." (emphasis added)

Attachment B, Section III.D.2 shall be modified as follows: "For NSPS equipment: At all times, including periods of startup, shutdown and malfunction, Permittee shall, to the extent practicable, maintain and operate the secondary and tertiary crushing circuits and the associated **air pollution control equipment** in a manner consistent with good air pollution control practices for minimizing particulate matter emissions." (emphasis added)

Attachment B, Section III.D.4: Exhaust from the No. 2 Cartridge Dust Collector (Source ID 202) shall be vented indoors.

ATTACHMENT "C" - EQUIPMENT LIST
Addenda (Minor Revision) to Operating Permit No. M190699P2-99 as amended by
Significant Permit Revision No. 35636

for

Phelps Dodge Sierrita Inc.

The following shall be added to Attachment "C" of Operating Permit No. M190699P2-99 as amended by Significant Permit Revision No. 35636.

ID	EQUIPMENT NAME	CAPACITY	YEAR OF MANU/ INSTALLATION	NSPS (Y/N)	MATERIAL HANDLING FACILITY	MAKE, MODEL, SIERRITA ID #
<i>SECTION IV: FINE ORE CRUSHING – SECONDARY AND TERTIARY CRUSHING (REQUIREMENTS IN SECTION III)</i>						
#2 Secondary Crushing Line						
202	#2 Coarse Ore Reclaim Belt (Apron Feeder)	2000 tph	1968	N	N	
	#2 Coarse Ore Reclaim Feeders (2 Feeders – North and South)	1200 tph	1968	N	N	Stephen-Adamson 48' Apron Feeders
	#2 Scalping Screen	1422.5 tph	2007	Y	N	Ludowici Innovative 10'x20' DD
	8A Conveyor Belt (emissions pick-up on belt from #2 Scalping Screen)		1968	Y	N	
	#2 Secondary Crusher (emissions pick-up from discharge screen)	1422.5 tph	2008	Y	N	Svedala/Sandvik H8800 Crusher
	#2 Secondary Discharge Screen	1422.5 tph	1993	Y	N	Allis Mineral Systems 8' x 16'
	7B Conveyor Belt (emissions pick-up on belt from #2 Secondary Discharge Screen)			N	N	
	8B Conveyor Belt (emissions pick-up on belt from #2 Secondary Discharge Screen)		1968	Y	N	
	#2 Secondary Dust Collector -- Vented Indoors	40,500 acfm	2008	Y	N	FARR Cartridge-Type Dust Collector Vented Indoors

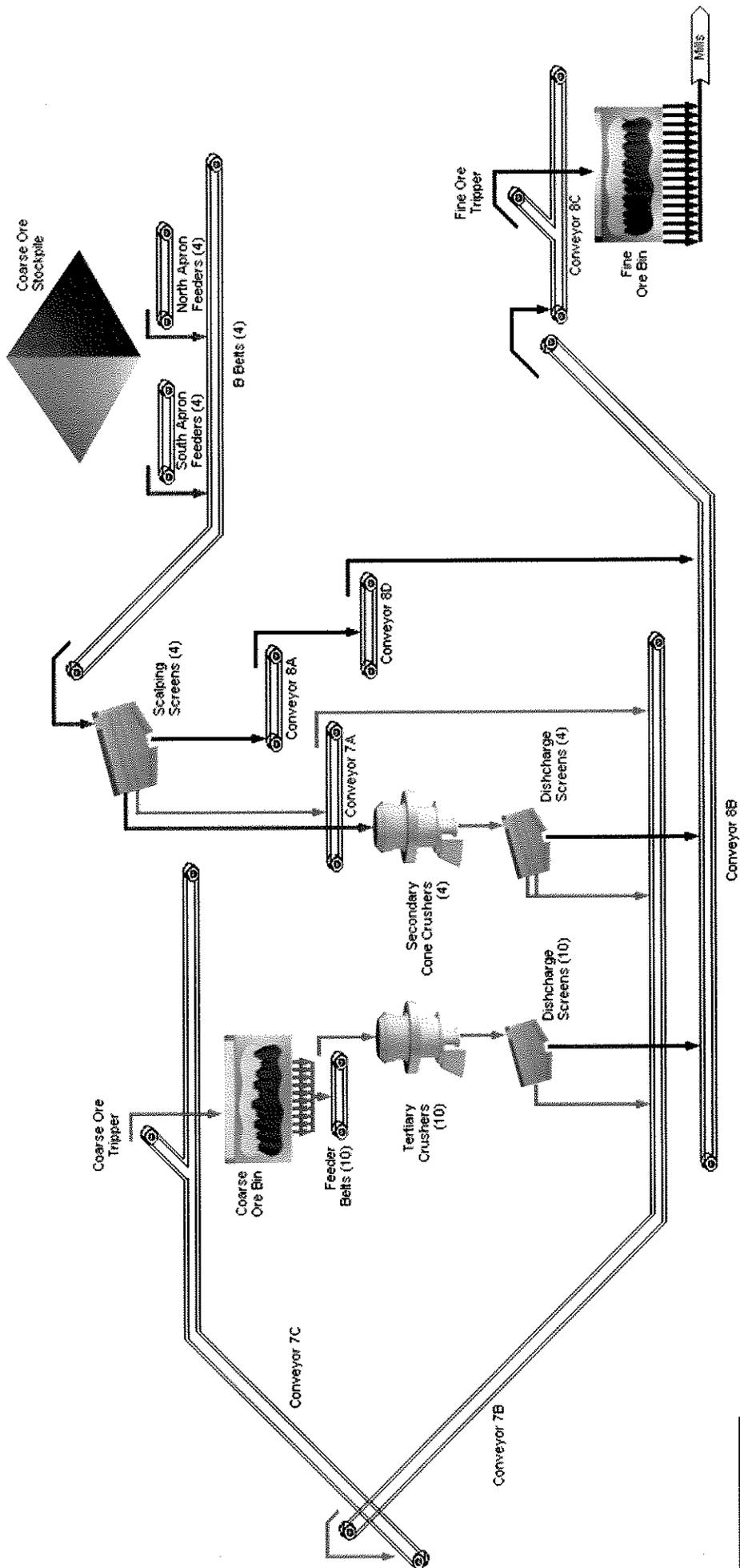
Attachment 1

Fine Crushing Plant Process Flow Diagram

Phelps Dodge Sierrita, Inc.

Minor Permit Revision to Permit No. M190699P2-99

December 21, 2006



LEGEND

—	Large Crushed Ore
---	Midsized Crushed Ore
---	Fine Crushed Ore

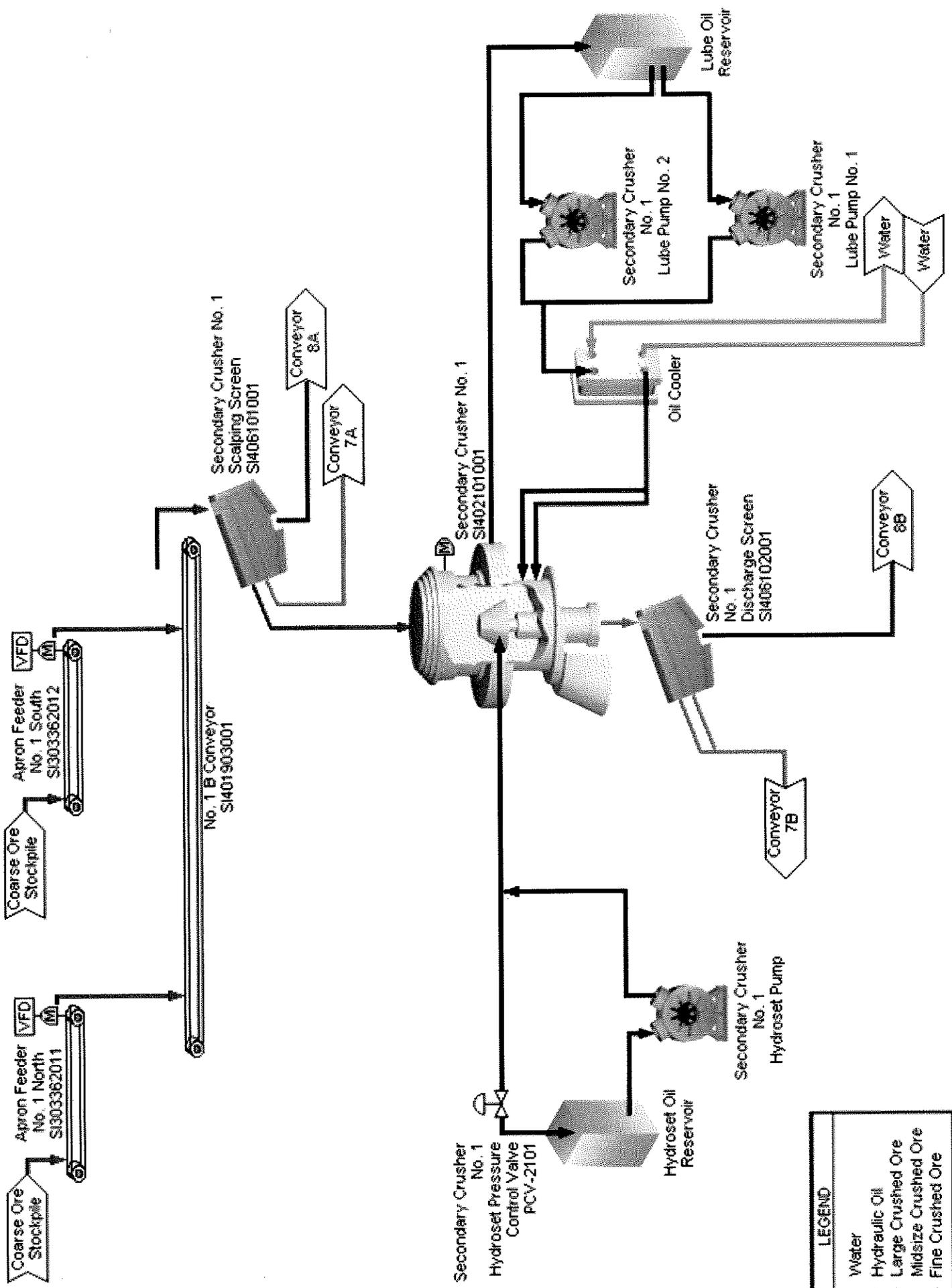
Attachment 2

Secondary Crushing Line Process Flow Diagram

Phelps Dodge Sierrita, Inc.

Minor Permit Revision to Permit No. M190699P2-99

December 21, 2006



LEGEND	
---	Water
---	Hydraulic Oil
---	Large Crushed Ore
---	Midsize Crushed Ore
---	Fine Crushed Ore