

**Technical Review and the Evaluation of the Application
for
Air Quality Minor Permit Revision #46490**

I. INTRODUCTION

This Class I Minor Revision authorizes Phelps Dodge Sierrita, Inc. dba Freeport McMoran Copper & Gold-Sierrita (FMCGS), to replace one of its existing Allis-Chalmers secondary crusher with a Sandvik H-8800 crusher. Capacity of the existing crusher is 1215 tons per hour and the capacity of the new crusher is 1422.5 tons per hour. The change is being done due to scarcity of spare parts for the existing crusher. Though the capacity of the new secondary crusher is higher than the one being replaced, there will not be any increase in the throughput since the capacity of the downstream tertiary crushing unit acts as a bottleneck. The maximum capacity of the tertiary crushing circuit is 116,688 tons per year. This change meets all the requirements of a minor permit revision.

II EMISSIONS

Currently, emissions from the four secondary crushers and the 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 controlled by the No.10 wet scrubber (Source ID 075). Through this minor permit revision, FMCGS is proposing to replace one secondary crusher with a new Sandvik, H-8800 crusher and install a new FARR cartridge-type dust collector (Source ID 202) 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). The facility believes that 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 decrease in duct work.

The increase in actual emissions from the new secondary crusher has been calculated with an emission factor of 0.02 grains per dscf (per 40 CFR 60.382). The total air flow from the proposed FARR cartridge-type dust collector is 40,000 acfm. From the engineering calculations, it has been determined that the air flow from the secondary crusher alone is 9,500 acfm (8137 dscfm). Based on this, the emissions of particulate matter (PM) and particulate matter below 10 micron size (PM₁₀) will increase by 6.11 tons per year (tpy). The increase in emissions is below the "significant" thresholds of 25 tpy of PM and 15 tpy of PM₁₀. The proposed cartridge-type dust collector is designed with filters that are rated at 99.999% efficiency on 0.5 microns and larger particles. The vendor of the FARR dust collector warranties that the emissions from the collector will not exceed 0.002 gr/dscf for overall PM and 0.001 gr/dscf for PM₁₀. These numbers are well below the emission factor of 0.02 grains/dscf assumed in the calculations. Further, since the clean air from dust collector will be routed inside the fine crushing building, there should be no emissions vented to the ambient air.

III. PERIODIC MONITORING

No changes in the frequency of periodic monitoring are occurring as part of this minor revision.

IV. TESTING REQUIREMENTS

No changes in the frequency of testing requirements are being made as part of this minor revision.

V. MINOR REVISION GATEKEEPERS

The Department has determined that this revision meets the requirements of a minor revision. Each minor revision trigger is listed below along with a discussion of why this revision meets those triggers.

1. Does not violate any applicable requirement;

The replacement of one Allis-Chalmers secondary crusher with a new Sandvik 8800 crusher will not violate any applicable requirements.

2. Do not involve substantive changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

There are no changes to monitoring, reporting, or recordkeeping requirements as a result of the change.

3. Does 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;

The revision does 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.

4. Do 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 terms and conditions include:

- a. A federally enforceable emission cap that the source would assume to avoid classification as a modification under any provision of Title I of the Act; and
- b. An alternative emission limit approved under regulations promulgated under the Section 112(i)(5) of the Act.

The proposed change does not seek to establish or change any permit term or condition for which there is no corresponding underlying applicable requirement. No new emission limitations or other permit conditions are being proposed for avoiding requirements which would apply otherwise.

5. Are not modifications under any provision of Title I of the Act;

The change is not a modification under any provision of Title I of the Act. The increase in actual emissions, as discussed earlier, is less than PSD Significant levels. Additionally, there are no NSPS modifications being performed as part of this project.

6. Are not changes in fuels not represented in the permit application or provided for in the permit;

There are no changes in fuels associated with this minor revision.

7. The increase in the source's potential to emit any regulated air pollutant is not significant as defined in R18-2-101;

With this change, the potential emissions of PM and PM₁₀ will increase by 6.11 tpy. The increase in emissions is below the "significant" thresholds of 25 tpy of PM and 15 tpy of PM₁₀. The revision does not increase the potential to emit of any regulated pollutant above the significance level as listed in A.A.C. R18-2-101(106).

8. Are not required to be processed as a significant revision under R18-2-320.

A.A.C. R18-2-320 does not require this revision to be processed as a significant revision.

