

**TECHNICAL REVIEW AND EVALUATION OF APPLICATION FOR  
SIGNIFICANT REVISION #48969 TO  
OPERATING AIR QUALITY PERMIT #42474**

**I. Introduction**

This Significant Revision #48969 to Air Quality Operating Permit #42474 is for the addition of an emergency diesel-fueled engine. The Morenci mine is located on US Highway 191 in Morenci, Greenlee County, Arizona. Freeport-McMoRan Morenci Inc. (FMMI) operates the open pit mine, ore processing, and copper concentrate facilities. FMMI holds an 85 percent undivided ownership interest in the Morenci operations, the rest of the remaining 15 percent is owned by Sumitomo Metal Mining Co. Ltd. and Sumitomo Corporation.

**Company Information**

Facility Name: Freeport-McMoRan Morenci Inc. (FMMI Copper Open Pit Mine)

Mailing Address: 4521 U.S. Highway 191, Morenci, Greenlee County, AZ 85540.

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**II. Process Description**

This significant revision is for the addition of an emergency diesel engine (757 HP with electricity generator). This emergency diesel engine will provide power to the management command center and computers in the event of commercial power interruption or unreliability issues.

**III. Emissions**

Based on 300 hours of operation in a year, this emergency diesel engine has the potential to emit 1.2 tons per year of nitrogen oxides (NO<sub>x</sub>) and non-methane hydrocarbons (NMHC), 0.65 tons per year of carbon monoxide (CO), 0.05 tons per year of sulfur dioxide (SO<sub>2</sub>) and 0.04 tons per year of particulate matter (PM). Though there is an increase in the emission of all the criteria pollutants, the increases are below the significant thresholds provided in A.A.C. R18-2-101(106). Thus the proposed project is not a “major modification” and therefore does not trigger the Prevention of Significant Deterioration (PSD) requirements.

**IV. Compliance History**

Inspections are being regularly conducted at FMMI to ensure compliance with permit conditions. FMMI is currently in compliance with the permit conditions cited in Permit #42474. FMMI has not been issued any Notice of Violation (NOV) since the issuance of the Title V permit #42474.

**V. Applicable Requirements**

The Permittee has identified the applicable regulations that apply to the emergency diesel-fueled engine. Table below summarizes the findings of the Department with respect to the regulations that apply to this equipment.

**Table 1: Applicable Regulations**

<b>Unit</b>	<b>Rule</b>	<b>Verification</b>
Emergency diesel-fired engine	40 CFR § 60.4200 Subpart III	NSPS Subpart III for New Stationary Sources for Compression Ignition (CI) Internal Combustion Engines applies to engines having a date of construction (order date) after July 11, 2005.  NESHAP Subpart ZZZZ is applicable to the stationary reciprocating internal combustion engine located at major and area source of HAP emissions. The source has a new ICE manufactured in the year 2008. This engine is subject to Subpart ZZZZ. The requirements of this part are met by meeting the requirements of NSPS Subpart III.

**VI. Previous Permits and Conditions**

**A. Previous Permits**

**Table 2: Previous Permits**

<b>Date of Permit Issuance</b>	<b>Permit Number</b>	<b>Application Basis</b>
September 30, 2008	42474	Operating Permit
March 9, 2009	48681	Minor Permit Revision

**B. Previous Permit Conditions**

All previous permit conditions have been retained. Condition XV for the requirements of emergency diesel-fired engine has been added to the Operating Permit #42474.

**VII. Periodic Monitoring**

**A. Emergency Diesel Engine**

The Permittee is required to maintain monthly records of engine operation. The records must include the purposes of operation and duration of time the engine has operated.

**B. Fuel Specifications**

The Permittee must keep records of fuel supplier specifications. The specifications shall contain information regarding the name of fuel supplier and sulfur content.

**VIII. LIST OF ABBREVIATIONS**

A.A.C.	Arizona Administrative Code
CFR	Code of Federal Regulation
CO	Carbon Monoxide
FMMI	Freeport-McMoran Morenci Inc.
HP	Horse Power
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMHC	Non-Methane Hydrocarbons
NO <sub>x</sub>	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Nominally less than 10 Micrometers
PSD	Prevention of Significant Deterioration
SO <sub>2</sub>	Sulfur Dioxide
VOC	Volatile Organic Compound