

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
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Matthias Sayer
Deputy Cabinet Secretary

Fernando Martinez, Director
Mining and Minerals Division



CERTIFIED MAIL – RETURN RECEIPT REQUESTED

7012 0470 0000 0880 5989

June 2, 2017

Thomas L. Shelley, Manager
Freeport-McMoRan Copper and Gold
Cobre Mining Company
P.O. Box 10
Bayard, New Mexico 88023

**RE: Conditional Approval of the Cobre Haul Road Blasting Plan
Freeport-McMoRan-Cobre Mining Company
Continental Mine Permit No. GR002RE, Revision 14-1**

Dear Mr. Shelley:

On May 8, 2017, the Mining and Minerals Division (“MMD”) received a copy of the *Cobre Haul Road Blasting Plan* (“Plan”) dated May 2, 2017, and prepared by Freeport-McMoRan Cobre Mining Company (“Cobre”) in accordance with Section 9 A, Condition 11 of Permit Revision 14-1 to Permit GR002RE (“Permit”) and 19.10.5.508.B (11) NMAC which requires the following:

(11) Explosives Blasting shall be conducted to prevent injury to persons or damage to property not owned by the operator. Fly rock shall be confined to the permit area. The Director may require a detailed blasting plan, pre-blast surveys or specify blast design limits to control possible adverse effects to structures.

Pursuant to the Permit and 19.10.5.508.B (11) NMAC, MMD has reviewed the Plan and herewith provides its conditional approval of the Cobre Haul Road Blasting Plan contingent upon Cobre’s acknowledgment of the following comments and recommendations:

1. The Plan should comply with all applicable state and federal laws in the use of explosives and should be signed or stamped by the Certified or Licensed Blaster responsible for executing the Plan, and all blasting operations should be conducted under the direction of a Certified or Licensed Blaster.

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2. Blasting should be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of surface or ground water outside the permit area.
3. Given the proximity of blasting operations to private property not directly controlled or owned by Cobre, MMD recommends that Cobre conduct a pre-blast survey and use the information obtained by the survey to supplement the Plan with a blast design prepared and signed by a certified blaster if blasting operations will be conducted within 1,000 feet of any building used as a dwelling, public building, school, church, or community or institutional building outside the permit area. The blast design should contain sketches of the drill patterns, delay periods, type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used for protection of the public from airblast, flyrock, and ground vibration.
4. At least 30 days before initiation of blasting, Cobre should notify, in writing, all residents or owners of dwellings or other structures located within 1/2 mile of the permit area how to request a preblasting survey. A resident or owner of a dwelling or structure with 1/2 mile of any part of the permit area may request a preblasting survey. Any such requests should be made, in writing, directly to Cobre or to the Director, who shall then promptly notify Cobre or its contractor of the request. Cobre or its contractor should then promptly conduct a preblasting survey of the dwelling or structure and prepare a written report of the survey. An updated survey of any additions, modifications, or renovations should be performed by Cobre if requested by the resident or owner to determine the condition of the dwelling or structure and document any preblasting damage and any other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data.
5. Cobre should develop a blasting schedule to be made available to the public, if requested. The schedule should be made available at least 10 days, but not more than 30 days, before beginning blasting operations; The blasting schedule should contain, at a minimum:
 - (A) name, address, and telephone number of operator.
 - (B) identification of the specific areas in which blasting will take place;
 - (C) dates and time periods when explosives are to be detonated;
 - (D) methods to be used to control access to the blasting area; and
 - (E) type and patterns of audible warning and all-clear signals to be used before and after blasting.
6. Cobre should employ the use of blasting signs, warnings and access control, including use of conspicuously placed signs reading “Blasting Area” along the edge of any blasting area that comes within 100 feet of any public road or right-of-way, and at the point where any

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other road provides access to the blasting area. Additionally, all entrances to the permit area that are accessible from public roads or highways should have warning signs conspicuously in place near these areas. Access to and within the blasting area should be controlled to prevent presence of livestock or unauthorized persons during blasting and until Cobre or an authorized representative of Cobre or its contractor has reasonably determined that no unusual hazards such as imminent landslides or undetonated explosive charges exist and that access to and travel within the blasting area can be safely resumed.

7. Flyrock travelling in the air or along the ground should not be cast outside of the permit area or from outside of the blasting area more than one-half of the distance to the nearest dwelling or other occupied structure.
8. Ground vibrations from blasting operations should be monitored by approved seismograph equipment and maximum vibrations should not exceed the values in Cobre's blasting plan and a seismographic record should be provided for each blast.
9. Cobre should retain a record of all blasts for at least 3 years. Upon request, copies of these records should be made available to the Director and to the public for inspection. Such records should contain the following data:
 - (A) name of the operator conducting the blast;
 - (B) location, date, and time of the blast;
 - (C) name, signature, and certification number of the blaster conducting the blast;
 - (D) identification, direction, and distance, in feet, from the nearest blast hole to the nearest dwelling, public building, school, church, community or institutional building outside the permit area
 - (E) weather conditions, including those which may cause possible adverse blasting effects;
 - (F) type of material blasted;
 - (G) sketches of the blast pattern, including number of holes, burden, spacing, decks, and delay patterns;
 - (H) diameter and depth of holes;
 - (I) types of explosives used;
 - (J) total weight of explosives used per hole;
 - (K) the maximum weight of explosives detonated in an 8-millisecond period;
 - (L) initiation system;
 - (M) type and length of stemming;
 - (N) mats or other protection used;
 - (O) seismographic and airblast records, if required, which shall include:
 1. type of instrument, sensitivity, and calibration signal or certification of annual calibration;
 2. exact location of instrument and the date, time, and distance from the blast;
 3. name of the person and firm taking the reading;
 4. name of the person and firm analyzing the seismographic record; and
 5. the vibration and/or airblast level recorded;

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(P) reasons and conditions for each unscheduled blast.

MMD recommends that Cobre considers the implementation of these comments and recommendations into a revised blasting plan and submitting the revised blasting plan to MMD for our records prior to conducting any blasting operations for construction of the Cobre Haul Road. If you have any questions concerning this letter, please contact me at (505) 476-3436 or via email at: james.hollen@state.nm.us.

Sincerely,



James Hollen, Permit Lead - Permit GR002RE
Mining Act Reclamation Program ("MARF")/MMD

cc: Holland Shepherd, Program Manager, MARP/MMD
Kurt Vollbrecht, Program Manager, NMED/GWQB-MECS
Douglas Haywood, Project Manager, Bureau of Land Management,
Las Cruces District Office
Mine File - Permit GR002RE