



## Proposed Revision to the Pima County Portion of the Arizona State Implementation Plan

This submittal will add one rule to the existing approved Arizona State Implementation Plan (SIP), in particular the Pima County portion of the Arizona SIP. The rule that will be added is Pima County Code Title 17: Air Quality Control, Chapter 16: Emissions Limiting Standards, Section 17.16.125, titled Inactive mineral tailings impoundment and slag storage area within the Ajo PM<sub>10</sub> Planning Area.

The text of this rule is provided here, additions to the SIP are underlined.

### **17.16.125 - Inactive mineral tailings impoundment and slag storage area within the Ajo PM<sub>10</sub> Planning Area.**

A. Applicability. This Section applies to the owner or operator of the inactive mineral tailings impoundment and slag storage area within the Ajo PM<sub>10</sub> Planning Area.

B. Definitions. The following definitions apply for the purposes of this Section:

1. "Affected area" means the Ajo PM<sub>10</sub> Planning Area.
2. "Ajo PM<sub>10</sub> Planning Area" means the area designated in 40 C.F.R. §81.303, adopted as of June 30, 2017 with no future editions or amendments.
3. "Chemical or organic soil stabilizer" means hygroscopic material, solution of water and chemical surfactant foam, non-toxic chemical stabilizer or any other chemical or organic dust palliative that is not prohibited by the U. S. Environmental Protection Agency, the Arizona Department of Environmental Quality, the Pima County Department of Environmental Quality or any applicable law, rule, or regulation, as a treatment material for reducing PM<sub>10</sub> emissions.
4. "Coarse" with respect to copper smelter slag material means no less than 3/8 inches in diameter.
5. "Copper smelter slag" means the waste material consisting primarily of iron sulfides separated from copper matte during the smelting and refining of copper ore concentrates.
6. "Crushed rock" means crushed stone or angular rock of a size 2 inches or greater in diameter.
7. "Department" means the Pima County Department of Environmental Quality.
8. "Gravel" means a loose aggregation of rock fragments of low silt content (5% or less) and less than 2 inches in diameter.



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9. “High wind event” means an hourly average wind speed of 25 miles per hour or more or an instantaneous wind gust of 40 miles per hour or more as measured in the affected area by a meteorological monitoring station.
10. “Inactive” with respect to the mineral tailings impoundment and slag storage area means that activities in support of ongoing mining operations or for any commercial purpose no longer occur.
11. “Meteorological monitoring station” means one of the following:
  - a. A Pima County Department of Environmental Quality meteorological monitoring station;
  - b. A station operated by the National Weather Service;
  - c. A Remote Automated Weather Station operated by the United States Forest Service, or United States Bureau of Land Management;
  - d. An Automated Weather Observing System or Automated Surface Observing System station, located at an airport, and either operated or certified by the Federal Aviation Administration; or
  - e. Any other meteorological equipment or wind instrument that is installed, calibrated, operated, and maintained by the owner or operator in accordance with the requirements for SLAMS/SPM (non-NCORE) instruments in *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements Version 2.0 (Final)*, publication number EPA-454/B-08-002, March 2008, and no future editions or amendments, and manufacturer's specifications, as applicable.
12. “Mineral tailings impoundment” means the earth-fill embankment dams used to store byproducts of prior mining operations that separated mineral ore from other unused material.
13. “Opacity” means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
14. “Particulate matter” means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than one hundred micrometers.
15. “PM<sub>10</sub>” means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method contained within 40 C.F.R. Part 50, Appendix J or by an equivalent method designated in accordance with 40 C.F.R. Part 53, both sections adopted as of June 30, 2017 with no future editions or amendments.
16. “Slag storage area” means the area used to store copper smelter slag.
17. “Vegetative cover” means rooted vegetation or unattached vegetative debris lying on the surface that is not susceptible to movement by wind.

C. Control Measures.



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1. The owner or operator shall implement and maintain at least one of the following reasonably available control measures to reduce PM<sub>10</sub> emissions from the inactive mineral tailings impoundment to ensure compliance with subsection D.1 below:
  - a. Application of crushed rock or gravel;
  - b. Application of chemical or organic soil stabilizers;
  - c. Application of water;
  - d. Establishment of vegetative cover; or
  - e. Any other equivalent methods or techniques approved by the Department and EPA Region IX.
2. The owner or operator shall implement and maintain at least one of the following reasonably available control measures to reduce PM<sub>10</sub> emissions from the inactive slag storage area:
  - a. Application of a cap consisting of coarse copper smelter slag material; or
  - b. Any other equivalent methods or techniques approved by the Department and EPA Region IX.
3. To prevent trespass in the inactive mineral tailings impoundment and slag storage area, the owner or operator shall install and maintain the following:
  - a. No trespassing signs; and
  - b. Physical barriers such as fences, gates, posts, shrubs, trees, or other measures to effectively restrict access from the general public.

D. Opacity Standard.

1. The owner or operator shall not cause or allow visible emissions to exceed twenty percent opacity from the mineral tailings impoundment. Opacity shall be determined in accordance with subsection E.1 below.
2. The opacity standard in subsection D.1 above shall not apply during high wind events if the owner or operator has implemented and maintained reasonably available control measures required in subsections C.1 and C.3 above for the mineral tailings impoundment, as documented by subsection F.1.a below.

E. Monitoring.

1. To demonstrate compliance with subsections C.1 and D.1 above, the owner or operator shall conduct weekly visible emission observations of the mineral tailings impoundment.
  - a. All observations shall be conducted in accordance with 40 C.F.R. Part 60, Appendix A, Reference Method 9.
  - b. As an alternative to subsection E.1.a, the owner or operator may elect to conduct observation in accordance with ASTM D7520-16. If so, the owner or operator must have standard operating procedures in place to ensure that equipment is operated and maintained in accordance with manufacturer's specifications per Section 8.1 of ASTM D7520-16.



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2. To demonstrate compliance with subsection C.2 above, the owner or operator shall conduct monthly inspections of the slag storage area to assess the effectiveness of control measures. Inspection reports shall, at a minimum, include identification of inspector; inspection date and time; findings of inspection, and any corrective action or preventive measures to be taken.
3. To demonstrate compliance with subsection C.3 above, the owner or operator shall conduct monthly inspections of trespassing signs and physical constraints. Inspection reports shall, at a minimum, include identification of inspector; inspection date and time; findings of inspection, and any corrective action or preventive measures to be taken.

F. Recordkeeping.

1. The owner or operator shall maintain and make available to the Department or EPA Region IX the following records upon request:
  - a. Records of reasonably available control measures implemented and maintained as required by subsection C above;
  - b. Records of visible emission observations required by subsection E.1 above;
  - c. Records of inspections required by subsections E.2 and E.3 above;
  - d. Records of observer EPA Reference Method 9 or ASTM D7520-16 certifications;
  - e. Records of the owner or operator's installation, calibration, certification, operation, and maintenance of any meteorological equipment or wind instrument used for purposes of identifying high wind events; and
  - f. Records of meteorological monitoring station data used for purposes of identifying high wind events.
2. If the owner or operator elects to conduct weekly visual observations in accordance with subsection E.1.b, the following records shall be maintained:
  - a. ASTM D7520-16 certification documentation, data sheets, and all raw unaltered JPEGs used for opacity and certification determination, recorded in a form suitable and readily available for expeditious inspection and review.
  - b. Standard operating procedures used to ensure that equipment is operated and maintained in accordance with manufacturer's specifications per Section 8.1 of ASTM D7520-16.
3. All records required by this section shall be maintained by the owner or operator for a minimum of 5 years.

G. Notification.

1. The owner or operator shall provide written notification to the Department at least 30 days prior to initiating weekly visual observations in accordance with subsection E.1. The notification shall identify proposed observation points/locations and provide justification for the selection of those points/locations.
2. The owner or operator shall provide written notification to the Department at least 30 days prior to using any meteorological monitoring station as described in subsection B.11.e.

H. Reporting.

1. The owner or operator shall report to the Department any visible emissions in excess of opacity limit established by subsection D.1. The report shall be in two parts as specified below:
  - a. Notification by telephone or facsimile within 24 hours of the time the owner or operator first learned of the occurrence of excess opacity that includes all available information from subsection H.2.
  - b. Detailed written notification by submission of an excess opacity report within 72 hours of the notification under subsection H.1.a.
2. The excess opacity report shall contain the following information:
  - a. The approximate location at the mineral tailing impoundment where the excess opacity occurred;
  - b. The level of excess opacity as measured in accordance with subsection F;
  - c. The time and duration or expected duration of the excess opacity;
  - d. The nature and cause or suspected cause of the excess opacity;
  - e. The steps that were or are being taken to limit the excess opacity; and
  - f. Any corrective action or preventative measures taken.
3. In the case of continuous or recurring excess opacity events, the notification requirements of this subsection shall be satisfied if the owner or operator provides the required notification after excess opacity events are first detected and includes in the notification an estimate of the time the excess opacity events will continue. Excess opacity occurring after the estimated time period or changes in the nature of the excess opacity as originally reported shall require additional notification pursuant to subsections H.1 and H.2.

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