

# **FINAL RULE TO REDUCE MERCURY EMISSIONS FROM GOLD MINE ORE PROCESSING AND PRODUCTION SOURCES**

## **FACT SHEET**

### **ACTION**

- On February 17, 2011, the U.S. Environmental Protection Agency (EPA) promulgated National Emissions Standards for Hazardous Air Pollutants for gold ore processing and production facilities, the seventh largest source of mercury air emission in the United States.
- We estimate the final rule will reduce mercury emissions by 1,460 pounds per year (down to about 1,200 pounds per year), or about a 77 percent reduction from 2007 levels.
- Gold ore processing and production facilities extract gold from mined ore. There are more than 20 gold ore processing facilities in the United States, all of which would be subject to today's final rule.
- Some facilities in Nevada, including some of the nation's largest gold ore processing facilities, are already making significant progress toward the proposed reductions under the Nevada Mercury Air Emissions Control Program, which requires controls at precious metal mining facilities.
- EPA estimates capital costs of this final rule at \$36.5 million, with annual costs of \$9.1 million a year.
- Mercury is the only air toxic that would be regulated under this final rule. Gold processing and production facilities have not been identified as major sources of hazardous air pollutants, also known as air toxics. A "major source" emits 10 or more tons a year of a single air toxic, or 25 or more tons a year of a combination of toxics.
- However, because gold ore processing and production is a significant source of mercury emissions, it falls under a section of the Clean Air Act that requires EPA to establish standards known as maximum achievable control technology (MACT) for sources of seven air toxics known as persistent, bioaccumulative pollutants, including mercury.
- Mercury in the air eventually deposits into water, where it transforms into methylmercury, a highly toxic form that builds up in fish. Americans are primarily exposed to mercury by eating contaminated fish.
- Because methylmercury can damage children's developing brains and nervous systems, even before they are born, women of childbearing age and children are the population of greatest concern.

## WHAT THE FINAL RULE WILL REQUIRE

- The final rule will establish mercury emissions limits for four types of processes found at gold production facilities: ore-pretreatment processes (primarily heating processes used to prepare ore for gold extraction); carbon processes with mercury retorts; carbon processes without mercury retorts; and non-carbon concentrate processes. (The latter three processes separate gold from ore.) The final emissions limits are based on the existing emissions level of the best-performing U.S. facilities, which are well-controlled for mercury.
- The final mercury limits are as follows:

<b>Affected Source</b>	<b>Existing Sources</b>	<b>New Sources</b>	<b>Units</b>
Ore pretreatment processes	127	84	lb/million tons of ore
Carbon processes with mercury retorts	2.2	0.8	lb/ton of concentrate
Carbon processes without mercury retorts	0.17	0.14	lb/ton of concentrate
Non-carbon concentrate processes	0.2	0.1	lb/ton of concentrate

- At full implementation, these limits are estimated to reduce mercury emissions by 0.73 tons per year from current emissions levels.
- Today's action also establishes several requirements for monitoring. These include requiring each facility to conduct annual mercury emissions tests at all emissions stacks.

## BACKGROUND

- The Clean Air Act requires EPA to identify and, develop regulations for, the sources of 90 percent of the air emissions of seven pollutants known as persistent, bioaccumulative pollutants. The seven pollutants are: mercury, alkylated lead compounds, polycyclic organic matter (POM), hexachlorobenzene, polychlorinatedbiphenyls (PCBs), 2,3,7,8-tetrachlorodibenzofurans (TCDF) and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).
- EPA identified gold processing and production as one of these sources in 2008.
- The State of Nevada and the gold ore processing and production industry have made significant progress in reducing mercury emissions in that state, under a combination of voluntary and regulatory programs. Approximately 14 of the more than 20 gold ore production and processing facilities are located in Nevada. Emissions have been reduced from about 11.5 tons in 1999 down to about 2.5 tons in 2007. Today's final rule will further reduce emissions from those facilities, in addition to limiting emissions from gold ore processing and production facilities in other states.

## FOR MORE INFORMATION

- Interested parties can download the final notice from EPA's website at the following address: [www.epa.gov/ttn/oarpg/t3pfpr.html](http://www.epa.gov/ttn/oarpg/t3pfpr.html).
- This final rule and other background information are also available either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
  - The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334 in the EPA West Building, located at 1301 Constitution Ave., NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
  - Visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
  - Materials for this final action can be accessed using Docket ID No. EPA-HQ-OAR-2010-0239.
- For more information about the final rule for gold ore processing, contact Chuck French of EPA's Office of Air Quality Planning and Standards at (919) 541-7912 or [french.chuck@epa.gov](mailto:french.chuck@epa.gov).