

Colorado Department of Public Health and Environment
Colorado Cooperative Program for Environmental Health Assessments



Colorado Department
of Public Health
and Environment

Follow-up Evaluation of the potential public Health Implications of Ambient Air
Exposures in the Vicinity of the Evraz Rocky Mountain Steel Mill, Pueblo,
Colorado

September 2013

The purpose of this follow-up letter health consultation is to determine the potential for public health impacts of manganese inhalation by reviewing the new ambient air PM₁₀ data in the vicinity of the Evraz Rocky Mountain Steel Mill (ERMS).

Site Background

ERMS plant operations include melting steel scrap with additives to produce molten steel, and producing forms such as rails. Over 150 grades of steel are made at the ERMS facility.

Based on the data that were available at the time of the previous health consultation in 2009, it was concluded that it could not be determined if the ambient air adjacent to the ERMS could harm residents' health. This conclusion was reached because the available ambient air data only included total suspended particulate (TSP) data. To fill this data gap, the Colorado Cooperative Program for Environmental Health Assessments (CCPEHA) made a recommendation to collect PM₁₀ (particulate matter less than 10 micrometers in diameter) ambient air data for manganese. Additional ambient air data have been collected since the time of the initial health consultation, including the PM₁₀ fraction.

What did CCPEHA find in the Health Consultation?

Based on the review of the available ambient air data, CCPEHA and ATSDR have reached one conclusion in regards to residential exposures. It should be noted that this conclusion is relevant only for residential exposure to the PM₁₀ data collected from the northern monitoring station. If additional environmental data or an alternative land-use/exposure scenario is identified in the future, the findings of this health consultation should be reconsidered.

Exposure to ambient air in the vicinity of the Evraz Rocky Mountain Steel Mill is not expected to harm current or future residents' health based on the currently available air monitoring data. This conclusion was reached because the estimated residential exposure concentration of manganese in ambient air near the steel mill is well below levels of manganese found to be associated with harmful health effects in human exposure studies. It should be noted, however, that this conclusion is associated with some uncertainty because the exposure point concentration of 0.146 µg /m³ for manganese in ambient air near the mill is 3 times greater than EPA Reference Concentration for manganese (i.e., above the acceptable level of Hazard Quotient of one).

What's next?

- ERMS should continue on-site monitoring with the collection of PM₁₀ data.
- As necessary, CCPEHA will evaluate any additional PM₁₀ data upon request.
- Upon request, CCPEHA will conduct the appropriate health education and outreach activities.

FREQUENTLY ASKED QUESTIONS:

What is a health consultation? A health consultation provides advice on a specific public health issue related to real or possible human exposure to toxic material. A Health Consultation is a way for the Colorado Department of Public Health and Environment to respond quickly to a need for health information on toxic substances and to make recommendations for actions to protect the public's health. Health Consultations may consider:

1. The levels (or "concentrations") of hazardous substances;
2. If and how people might be exposed to contamination (through "exposure pathways" such as breathing air, drinking or contacting water, contacting or eating soil, or eating food);
3. The harm the substances might cause to people (or the contaminants' "toxicity");
4. If and how working or living nearby might affect people's health; and 5. Other dangers to people, such as unsafe buildings, abandoned mine shafts, or other physical hazards.

Where can I find this health consultation?

An electronic copy of this health consultation can be found at:

<http://www.cdphe.state.co.us/dc/ehs/healthconsult.html>. To request a free copy of this health consultation, or for more information about the health consultation, please feel free to contact Thomas Simmons, Health Assessor, at 303-692-2961. For other site-related concerns, call Nancy Chick, Colorado Department of Public Health and Environment, at 303-692-3226 (direct) or toll free at 1-888-569-1831, ext. 3226.