



**Colorado Molybdenum Standards  
Update  
December 2014**

In May 2014, Climax Molybdenum published a fact sheet summarizing scientific and water quality information regarding molybdenum in connection with Climax's participation in the Water Quality Control Commission's June 2014 rulemaking hearing for the Upper Colorado River Basin. As part of our ongoing communications on this issue, this is an update to our stakeholders on progress made on water treatment at Climax, pending water standards setting for the South Platte River, and the latest research on molybdenum toxicology.

### **What is happening with the Climax Mine water treatment?**

Climax commissioned the new Property Discharge Water Treatment Plant (PDWTP) in early 2014 and began discharging treated water in July 2014. The PDWTP is a state-of-the-art process that will treat as much as 14,000 gallons per minute. The PDWTP is successfully protecting aquatic life and downstream uses of Tenmile Creek and meets all effluent limits and requirements of Climax's CDPS permit.

### **What is the status of ongoing toxicological research being performed for molybdenum?**

Prior to the June 2014 Upper Colorado Basin standards rulemaking, Climax provided many stakeholders with information on a published and peer-reviewed, 90-day dietary toxicity study that formed the basis for Climax's proposed human health-based water quality standard for molybdenum. The Journal of Reproductive Toxicology has just published a second, prenatal developmental toxicity study which is available in pdf format at:

<http://www.sciencedirect.com/science/article/pii/S089062381400238X>

The International Molybdenum Association (IMOA) remains actively involved in the development of new human health science for molybdenum. In September 2014, IMOA retained Charles River Laboratories to perform a guideline two-generation reproductive toxicity study of molybdenum. As with the two prior studies, this third study will be performed on rats. The objective of this study by IMOA is to strengthen the safety database and to complement previously completed 90-day dietary and prenatal developmental toxicity studies to provide a full suite of high-quality, published and peer-reviewed scientific information on molybdenum toxicity. The two-generation reproductive toxicity study will address key life stages for which reliable data is not currently available. To date, no multi-generational reproductive toxicity studies exist that were performed under Good Laboratory Practice guidelines or internationally accepted study protocols. As such, the two-generation reproductive toxicity study will focus on potential effects of molybdenum exposure prior to mating, during mating, throughout gestation and during the postnatal development. For this study, IMOA engaged EPA Headquarters in Washington D.C. for acceptance of study protocol and laboratory selection. The study is scheduled to begin in early 2015, completion is expected in late 2015 and results are anticipated to be available in time for consideration by the Water Quality Control Commission (WQCC) at its June 2016 Basic Standards hearing when the Commission will consider the human health-based water quality standard for molybdenum.

### **What are the next steps in standards setting for molybdenum?**

The WQCC is scheduled to reconsider its water quality standards for molybdenum in 2016, as part of its Basic Standards proceeding. Climax will actively participate in the Basic Standards Workgroup (<http://www.colowqforum.org/workgroup-basic-standards.html>) which will discuss both the human health and agriculture molybdenum standards at its meeting scheduled for January 22, 2015. Climax will provide an update as to the status of active research at the meeting.

Climax previously reported that EPA had been evaluating nationwide concentrations of molybdenum in drinking water as part of their Unregulated Contaminant Monitoring Rule. This monitoring was performed to determine

human exposure pursuant to the Candidate Contaminant List 3 (CCL3). In a recent Federal Register notice, EPA confirmed there were no detections in national representative or finished water at levels of public health concern. As such, EPA will no longer consider molybdenum as a nationally regulated contaminant under the Safe Drinking Water Act.

Climax will participate in the South Platte River basin hearings (Regulation 38) to provide any further updates on the status of ongoing research or regulatory activity. As discussed above, research that is underway is scheduled for completion ahead of the Basic Standards hearings before the WQCC in 2016.

### **With whom is Climax communicating?**

In addition to Climax's participation in regulatory proceedings before the WQCC, including the Basic Standards Workgroup process, Climax also recently presented molybdenum research updates to the Blue River Watershed Group, the Summit Water Quality Committee and the Upper Clear Creek Watershed Association. Along with our participation in the Basic Standards Workgroup process, we intend to provide periodic updates on the progress being made on the molybdenum standards issues to keep the stakeholders fully informed and engaged during this process.

### **How can I get more information?**

If you have specific questions or you would like a presentation made to your group, please contact:

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