

**PRELIMINARY COMPARISON OF PLANT SPECIES FOR HEAVY  
METAL CONCENTRATION WHEN GROWN ON  
RECLAIMED MOLYBDENUM TAILINGS<sup>1</sup>**

by

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**Abstract.** Our objective was to compare the response of 14 plant species (grasses, legumes and forbs) for heavy metal concentrations when grown on reclaimed Mo tailings and non-tailings background sites. Above-ground vegetation concentrations of Al, As, Cd, Cr, Cu, Mo, Ni, Pb, Se, and Zn were measured. All plant species were not present at each site, therefore the data was not statistically analyzed. Comparisons between Mo tailings and non-tailings sites suggest that growth on Mo tailings did not affect the plant concentrations of Al, As, Cd, Pb, Ni, Se, and Zn. The concentrations of Cr, Cu, and Mo were seemingly higher for plants grown on Mo tailings than non-tailings background sites. Plant species seemingly differed in their responses to Mo tailings for Mo concentration but not for Cr and Cu concentrations. Only one heavy metal concentration in one plant species (Mo concentration in *Melilotus officinalis*) exceeded the maximum tolerable dietary level for mule deer. We are planning an experiment to clarify the differences between plant species for the response of Mo, Cu and S concentrations to increased soil Mo levels.

Keywords: Molybdenum, Mo tailings, copper, heavy metal accumulation

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<sup>1</sup>Poster presentation at the 1991 National Meeting of the American Society for Surface Mining and Reclamation, Durango, CO, April 14-17, 1991.

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