

**INTRODUCTION OF A RISK-BASED APPROACH TO
MANAGING TRACE CONCENTRATIONS OF HEAVY METALS IN BARITE**

John Candler*

Jim Friedheim

Bob Bailey

M-I SWACO

5950 N. Course Drive

Houston, TX 77072

Voice: 281-561-1320

Fax: 281-561-1342

jcandler@miswaco.com

A risk-based approach provides a balance between supply issues and disposal issues for barite usage on land. Increased demand combined with tighter supplies of high-quality barite has squeezed the barite supply chain prompting concerns about use of lower-quality barite.

Onshore drilling fluid disposal practices typically result in large volumes of barite being buried on location or incorporated into the soil. Although heavy-metal concentrations in barite are generally low, the heavy-metal concentration can vary depending upon the source of the barite. Trace amounts of heavy metals in soil or waste can trigger environmental regulatory action if the metals are above screening values and location of the waste discharge is subject to an environmental cleanup investigation. Regulators have set risk-based screening limitations for heavy metals in cleanup regulations in both the USA and Europe. These risk-based limits are a function of the potential health impact to human receptors and minimum requirements for soil use categories. For sites that exceed pollutant screening levels, a process of accessing site- and waste-specific issues drives site-specific cleanup criteria. This paper will review available information on heavy metals in barite and a risk-based approach to balancing supply issues and disposal issues for barite.

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