

SMI

SORPTIVE MINERALS INSTITUTE

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VIA ELECTRONIC SUBMISSION - zzMSHA-comments@dol.gov

Ms. Sheila A. McConnell
Office of Standards, Regulations, and Variances
Mine Safety and Health Administration (MSHA)
201 12th Street South
Suite 4E401
Arlington, Virginia 22202-5452

Re: RIN 1219-AB36
Docket No. MSHA 2016-0013
Respirable Silica (Quartz) - Request for Information

Dear Ms. McConnell:

The Sorptive Minerals Institute (“SMI”) appreciates the opportunity to comment and provide information in response to the Mine Safety and Health Administration’s (“MSHA”) Request for Information regarding Respirable Silica (Quartz) (“RFI”) (30 CFR Parts 56, 57, 70, 71, 72, and 90, August 29, 2019). We hope the Agency will thoughtfully consider these comments, and the scientific studies and literature provided and referenced herein.

SMI is a Washington, DC-based trade association representing the manufacturers and marketers of absorbent clay products. Sorptive clays mined and processed by SMI members are a specific subset of clays that formed tens of millions of years ago. The sorptive clays that are found in the United States, which exist in only a few geologic deposits in the country including specifically: the Monterey formation (California), the Porters Creek formation (Mississippi Valley), the Twiggs and Meigs fullers earth (southeastern U.S.), the Wyoming or Western-type sodium bentonite deposits, the calcium bentonite deposits (north-central Florida), and the fullers earth deposits of eastern Virginia, have specific properties that render them extremely useful in a wide range of consumer products and commercial and industrial applications, including, for instance, clay-based pet litter, cosmetics, pharmaceuticals, animal feeds, specialized drilling muds and fluids used in oil, gas and water well drilling, and environmental sealants for

landfills and sewage lagoons. Additional information about SMI and its members is available at <http://www.sorptive.org>.

Because sorptive mineral clays contain silica (in both the crystalline form as well as in amorphous forms that raise no industrial health issues) SMI has, since its inception, concerned itself with the question of health effects of exposures to its products. Founded in 1970, SMI has served as a leader in scientific research and the leading storehouse of scientific work, information, and studies relevant to issues associated with the use and handling of sorptive clays. Through its Technical Committee, SMI has been heavily involved in crystalline silica research for over 32 years. During that time, SMI has produced a large body of research that has been presented at scientific conferences in the United States, Europe, and South Africa, and has been published in peer-reviewed scientific journals. SMI has worked cooperatively with regulatory bodies in California and other jurisdictions to assist these agencies in developing an understanding of the relevant scientific data necessary to assess inhalation exposure issues related to sorptive clay products. In California, for instance, this work led to the issuance of a Safe Use Determination (SUD) by the California Environmental Protection Agency's Office of Health Hazard Assessment (OEHHA) for crystalline silica in sorptive mineral-based pet litter.¹

While various forms of silica can be found in sorptive clay materials mined and processed by SMI members, in all cases, the silica exists in either an amorphous form (ie. opal), or, in a crystalline form as geologically ancient quartz characterized by amorphous occluded surfaces. It does not occur either as pure quartz or quartz with freshly fractured surfaces, which is created by industrial process such as sand blasting and rock cutting and drilling and was the specific focus of the OSHA rulemaking.

The mining and milling of sorptive clays fall within the regulatory responsibility of the Mine Safety and Health Administration (MSHA), Metal and Nonmetal Mine Safety and Health. In the United States, sorptive clays are exclusively mined above ground in open pit mines. SMI and its members recognize that the health and safety of our employees is critical to our success. As a result, SMI has frequently interacted with MSHA to ensure that appropriate safety measures exist in the sorptive mining industry. SMI looks forward to continuing to foster its relationship with MSHA on our shared goal of producing sorptive products in a working environment that is safe for all of our employees.

In 2009, the Occupational Safety and Health Administration (OSHA) initiated a plan to issue a new set of standards for occupational exposure to respirable crystalline silica. OSHA's Final Rule, which instituted a new permissible exposure limit (PEL) for respirable crystalline silica was published on March 25, 2016. During the course of this Rulemaking, public comments were provided by more than 1,750 individuals and stakeholder organizations. In 2014, as part of SMI's engagement in the Rulemaking, the organization submitted detailed comments² for the record, provided testimony³ to the Department of Labor as a witness

¹ While California's Safe Use Determination (SUD) relates to consumer exposures, the work supporting this determination is relevant to understanding of the nature of exposures to silica in sorptive clays. OEHHA's SUD issuance, which was published June 4, 1999 is available [here](#).

² Comment of the Sorptive Minerals Institute (SMI); Occupational Safety and Health Administration's Proposed Rule on Occupational Exposure to Respirable Crystalline Silica; Docket No. OSHA-2010-0034 – Submitted February 11, 2014 and available [here](#).

³ Sorptive Minerals Institute Presentation and Testimony at April 2, 2014 OSHA Public Hearing on Proposed Rule on Occupational Exposure to Crystalline Silica. Delivered April 2, 2014 and available [here](#).

in a public hearing and provided additional evidence for the record in follow-up to its testimony in the form of a post-hearing comment submission⁴ and post-hearing brief⁵.

Citing evidence produced in the studies outlined above that were provided to OSHA by SMI during the Rulemaking process, the agency excluded occupational exposures that resulted from the processing of sorptive clays from the scope of the rule, concluding that “quartz originating from bentonite and similar sorptive clays is considerably less toxic than unoccluded quartz”; that “evidence does not exist that would permit the Agency to evaluate the magnitude of the lifetime risk resulting from exposure to quartz in sorptive clays at the 100 µg/m³ PEL”; and that “evidence does not exist that would permit the Agency to evaluate the magnitude of the lifetime risk resulting from exposure to silica in sorptive clay deposits.”⁶

The SMI and its members respectfully request that the materials and scientific research and that were considered by OSHA as part of its Rulemaking be considered by MSHA as you evaluate the information provided to you by industry stakeholders regarding occupational exposure to respirable crystalline silica (quartz) in mining operations.

In addition, since the promulgation of the 2016 OSHA Rule, SMI has continued to execute cutting edge follow-on research to further study the surface characteristics of sorptive clays. We look forward to sharing the findings of this results with MSHA as they are finalized.

SMI appreciates the opportunity to comment and provide information in response to MSHA’s RFI regarding Respirable Silica (Quartz) and encourages the Agency to review its Comments carefully and the referenced scientific materials thoroughly. Please do not hesitate to contact me should you have any questions regarding the content included in this letter or regarding SMI’s position on this matter.

Sincerely,



Bryan D. Nicholson
Executive Director
Sorptive Minerals Institute (SMI)

⁴ Post-Hearing Submission of the Sorptive Minerals Institute (SMI); Occupational Safety and Health Administration's Proposed Rule on Occupational Exposure to Respirable Crystalline Silica; Docket No. OSHA-2010-0034 – Submitted June 3, 2014 and available [here](#).

⁵ Post-Hearing Brief Submitted on Behalf of the Sorptive Minerals Institute (SMI) re: Occupational Exposure to Crystalline Silica: Proposed Rule, 78 Federal Register 56274-504 – Submitted August 18, 2014 and available [here](#).

⁶ See 81 FR 16377.

PUBLIC SUBMISSION

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Comment On: MSHA-2016-0013-0001
Respirable Silica (Quartz) - Request for Information

Document: MSHA-2016-0013-0063
Comment from Bryan Nicholson,

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General Comment

Please find attached the comments of the Sorptive Minerals Institute (SMI) regarding the Mine Safety and Health Administration's (MSHA) Request for Information (RFI) on Respirable Silica (Quartz), Docket No. MSHA 2016-0013/RIN 1219-AB36.

Regards,

Bryan D. Nicholson
SMI Executive Director

Attachments

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