

American Federation of Labor and Congress of Industrial Organizations



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May 22, 2012

Dr. David Michaels
Assistant Secretary
Occupational Safety and Health Administration
U.S. Department of Labor
200 Constitution Avenue, N.W., Room S2315
Washington, DC 20210

Dr. John Howard
Director
National Institute for Occupational Safety and Health
395 E Street, S.W., Suite 9200
Patriots Plaza Building
Washington, DC 20201

Mr. Joseph Main
Assistant Secretary
Mine Safety and Health Administration
U.S. Department of Labor
1100 Wilson Boulevard, 21st Floor
Arlington, VA 22209

Dear Dr. Michaels, Dr. Howard and Mr. Main:

We are writing on behalf of the AFL-CIO and undersigned unions to express our deep concern about the serious safety and health risks faced by workers in the shale gas extraction industry, particularly the hydraulic fracturing (“fracking”) industry, an industry whose operations and workforce are rapidly expanding. We urge the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH) and Mine Safety and Health Administration (MSHA) to take action to protect workers in this industry and related sectors.

Recently, the National Institute for Occupational Safety and Health (NIOSH) reported that a two year assessment of the chemical health risks in the fracking industry identified high levels of worker exposure to crystalline silica. Many of these exposures were well in excess of permissible and recommended levels,

putting workers at risk of silicosis, lung cancer and other diseases. These findings coupled with concerns about health risks posed by chemical additives used in the fracking process and the well-documented safety hazards in this industry warrant immediate attention and action.

The NIOSH assessment, presented at an Institute of Medicine meeting on “The Health Impact Assessment of New Energy Sources: Shale Gas Extraction,” found that 47% of 116 total personal breathing zone samples for silica that were collected exceeded the OSHA PEL.¹ Seventy-nine percent (79%) of these samples exceeded the NIOSH REL (50 ug/m³), and 31% were greater than 10 times the NIOSH REL. Some silica exposures exceeded the maximum use concentration (MUC) for full face respirators – 5,000 ug/m³ at the OSHA PEL for 100% silica.

High levels of silica exposure were generated at many points in the hydraulic fracturing process, including release from all sand moving operations, loading operations, and sand transfer activities. (The sand is a major component in the hydraulic fracturing process, mixed with large volumes of water and chemical additives and injected under very high pressure by drilling into shale rock). According to NIOSH, massive quantities of sand are used in the process, up to 4 million pounds per well, and the sand is typically 100% silica. While not addressed by the NIOSH study, the increased demand for fracking sand has resulted in increased sand mining, processing and transport activities that may increase the risk for workers involved in these related industries.

The NIOSH industrial hygiene assessment also identified exposure to diesel particulates, airborne aldehydes and hydrogen sulfide as other potential health threats to workers engaged in hydraulic fracturing operations.

In addition to health threats, there are serious safety hazards in the oil and gas extraction industries that put workers at risk. According to other recent work by NIOSH, the oil and gas extraction industry had an occupational fatality rate of 27.5 deaths per 100,000 workers over the period of 2003 – 2009 – a rate more than seven times higher than the fatality rate for all U.S. workers. Motor vehicle

¹ Esswein, Eric J., et al, “NIOSH Field Effort to Assess Chemical Exposures in Oil and Gas Workers: Health Hazards in Hydraulic Fracturing,” PowerPoint presentation to Institute of Medicine meeting on The Health Impact Assessment of New Energy Sources: Shale Gas Extraction,” April 30, 2012, Washington, D.C.
<http://www.iom.edu/~media/Files/Activity%20Files/Environment/EnvironmentalHealthRT/2012-Apr-30/Esswein.pdf>

crashes, injuries from tools and equipment, explosions, moving machinery or tools and falls were the leading causes of worker deaths in this industry.

By all accounts the hydraulic fracturing industry is continuing to grow at a rapid pace. The number of wells being drilled and the number of workers employed are increasing, with many of the workers having little experience or knowledge about the potential hazards in this industry. The safety and health hazards documented in the NIOSH and other reports can be controlled through an appropriate combination of engineering controls, personal protective equipment, and worker training. However, a strong effort by the federal safety and health agencies is needed to work with the industry and involved unions to ensure that that these controls are properly implemented as employment in this industry sector rapidly grows.

To protect the workers in the fracking industry and related support industries from serious safety and health risks, OSHA, NIOSH and MSHA must take immediate action. Specifically we request and urge the following actions:

- OSHA and NIOSH immediately issue a joint “hazard alert” that identifies the occupational safety and health hazards in the fracking industry with a special focus on silica exposures, and recommends appropriate effective control measures to protect workers. This hazard alert should be broadly publicized and distributed to employers, trade associations, unions, federal and state agencies, public health officials and safety and health professionals and practitioners.
- OSHA develop and implement a National Emphasis Program (NEP) focused on hydraulic fracturing that includes training and outreach to workers and employers, compliance assistance and enforcement.
- OSHA immediately initiate rulemaking on a new silica standard and issue a proposed rule that includes requirements for exposure monitoring, medical surveillance and training in addition to a protective permissible exposure limit, and finalize this rule without delay.
- NIOSH expand its field work in the hydraulic fracturing industry to include medical surveillance of workers exposed to silica and to evaluate and recommended control measures to reduce/eliminate exposures to silica and other chemicals such as diesel particulates and aldehydes.

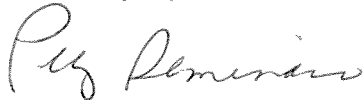
May 22, 2012

Page 4

- MSHA identify and evaluate the mines and quarries that are mining/processing silica sand for use in the hydraulic fracturing industry and assess miners' exposures to silica at those facilities and ensure that exposures are controlled.

Meeting our country's energy needs is an important undertaking. However, the development of new energy sources, and exploration of existing energy sources, must be done safely without putting workers in danger. Through extensive efforts, including effective regulation and oversight, tremendous progress has been made controlling hazards and reducing injuries, illnesses and fatalities in coal mining and other energy related sectors. We urge OSHA, NIOSH and MSHA to apply the same kind of effort and attention to the hydraulic fracturing industry and related sectors to ensure that workers in these industries have the workplace safety and health protections they need and deserve. The AFL-CIO and unions stand ready to work with the job agencies to achieve this goal.

Sincerely,



Peg Seminario,
Director, Safety & Health
American Federation of Labor and
Congress of Industrial Organizations

Dennis O'Dell
Administrator of Occupational Health and Safety
United Mine Workers of America

Michael J. Wright
Director of Health, Safety and Environment
United Steelworkers