

*NSSGA DPM Sampling Workshop:* As part of the Kentucky Stone Association Seminar, MSHA staff conducted a diesel particulate sampling workshop in Louisville, Kentucky from December 11 through 13, 2002. The three day seminar was hosted by the National Stone Sand and Gravel Association. On the first day of the seminar, diesel particulate sampling procedures were reviewed. The participants were trained in pump calibration, sample train assembly and note taking. On the second, participants traveled to the Rogers Group Jefferson County Mine and conducted full shift sampling on underground workers. MSHA technical support staff took ventilation measurements and collected area samples to assess mine DPM emissions. On the final day of the seminar, engine emission and ventilation measurements were reviewed with the participants. Additionally, the MSHA DPM outreach material was reviewed and discussed. Approximately 10 industry participants attended the seminar.

*Nevada Mining Association Safety Committee.* MSHA staff attended a meeting of the Nevada Mining Association Safety Committee in Elko, NV in April 2003 to discuss DPM control technologies. Discussion topics included bio-diesel fuel blends, various fuel additives and fuel pre-treatment devices, to mine ventilation, environmental cabs, clean engines, and diesel particulate filter systems. The mining companies' experiences with and perspectives on these technologies were discussed, along with MSHA's experiences, observations made at various mines, and results of laboratory and field testing.

*MSHA South Central Joint Mine Safety and Health Conference.* A DPM workshop was presented at this conference in April 2003 in New Orleans, LA. This workshop included a detailed history and explanation of the provisions of the MNM DPM regulation, and a technical presentation on feasible DPM engineering controls.

*2003 Joint National Meeting of the Joseph A. Holmes Safety Association, National Association of State Mine Inspection and Training Agencies, Mine Safety Institute of America, and Western TRAM (Training Resources Applied to Mining).* A DPM workshop was presented at this joint conference in June 2003 in Reno, NV. This workshop included a detailed history and explanation of the provisions of the MNM DPM regulation, and a technical presentation on DPM sampling, analytical tools for identifying and evaluating DPM sources in mines, and feasible DPM engineering controls.

*Web site postings.* MSHA created a single source page for DPM final rules for Metal/Nonmetal Mines on its Web site, [www.msha.gov](http://www.msha.gov). Links were established to obtain information on specific topics, including:

- DRAFT Metal and Nonmetal Health Inspection Procedures Handbook, Chapter T—Diesel Particulate Matter Sampling

- DRAFT Diesel Particulate Matter Sampling Field Notes

- Metal and Nonmetal Diesel Particulate Matter (DPM) Standard Error Factor for TC Analysis Written Compliance Strategy

- Metal and Nonmetal Diesel Particulate Matter (DPM) Standard Draft Compliance Guide

- Other Resources

- NIOSH Listserve

- Diesel Emissions and Control Technologies in Underground Metal and Nonmetal Mines

- Metal and Nonmetal Diesel

- Particulate Filter Selection Guide

- Baseline DPM Sample Results

- PowerPoint Presentations

- From Compliance Assistance

- Workshops on Diesel Rule

- Summary of Requirements Mine Safety and Health Administration's (MSHA's) Standard on Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners that are in effect as of July 20, 2002.

- SKC Diesel Particulate Matter Cassette with Precision-jeweled Impactor

- Diesel Particulate Matter (DPM) Control Technologies with Percent Removal Efficiency

- Diesel Particulate Matter (DPM) Control Technologies

- Table I: Non-Catalyzed Particulate Filters, Base Metal Particulate Filters, and Paper Filters

- Table II: Catalyzed (Platinum Based) Diesel Particulate Filters

- Work Place Emissions Control Estimator

- Advanced Notice of Proposed Rule Making (ANPRM)

- Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners (ANPRM)—09/25/2002

- Final Rules

- Part II—30 CFR Part 57—Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners—01/19/2001

- Part II—30 CFR Part 57—Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners—Delay of Effective Dates—05/21/2001

- Part II—30 CFR Part 57—Diesel Particulate Matter Exposure of

Underground Metal and Nonmetal Miners—Final Rule and Proposed Rule—07/05/2001

- Part II—30 CFR Part 57—Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners; Final Rule—02/27/2002

- Part II—30 CFR Part 57—Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners; Final Rule—07/18/2002

- Regulatory Economic Analysis

- Final Regulatory Economic Analysis And Regulatory Flexibility Analysis for Final Rule on 30 CFR Parts 57 Final Standards and Regulations—Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners

- News Releases

- MSHA Rules Will Control Miners' Exposure to Diesel Particulate—01/18/2001

- Program Information Bulletins

- PIB01—10 Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners—08/28/2001

- PIB02—04 Potential Health Hazard Caused by Platinum-Based Catalyzed Diesel Particulate Matter Exhaust Filters—05/31/2002—

- PIB02—08 Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners—Summary of Settlement Agreement—08/12/2002

In addition to the Web site postings specifically intended for the metal and nonmetal mining industry, MSHA has created a Diesel Single Source Page for the coal industry. A list of approved engines is accessible from the coal page. Many of the other topics found on that page may also be of interest to the metal and nonmetal mining industry, particularly for those operations at gassy metal/nonmetal mines where permissible equipment is required.

*Publications:* As part of the settlement agreement, MSHA agreed to issue citations for violations of the interim concentration limit only after MSHA and NIOSH are satisfied with the performance characteristics of the SKC sampler. During the 31-Mine study, MSHA observed that the deposit area of the SKC submicron impactor filter was not as consistent as those obtained for preliminary evaluation. This was attributed to inconsistent crimping of the aluminum foil cone on the filter capsule.

NIOSH, in collaboration with MSHA and SKC undertook a project to redesign the filter capsule and improve the consistency of the deposit area. This was accomplished by replacing the cone with a 32-mm inside diameter ring and replacing the 37-mm filter with a 38-mm filter. These modifications provided a