

NIOSH Nanotechnology Field Research Effort

Background: The National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention (CDC), is the leading federal agency conducting research and providing guidance on the occupational safety and health implications of exposure to engineered nanomaterials. As part of its nanotechnology research agenda, NIOSH created a field research team to assess workplace processes, materials, and control technologies associated with nanotechnology and conduct on-site assessments of potential occupational exposure to a variety of nanomaterials.

Purpose: The purpose and goals of the field research team are to: 1) characterize processes and identify potential nanomaterial emissions that could result in worker exposures, 2) evaluate potential workplace exposures using a variety of measurement techniques, 3) recommend safe work practices, and 4) evaluate exposure control measures. Through this effort, NIOSH will gather baseline data to assist in determining potential occupational safety and health implications of exposure to engineered nanomaterials and developing guidance to ensure safe working conditions.

Who can participate: Research laboratories, producers, and manufacturers working with engineered nanomaterials (1 to 100nm) are invited and encouraged to collaborate with NIOSH. Those who are interested, or unsure of whether they qualify, should contact NIOSH. Contact information is listed at the end of this document.

Benefits: Participants will be able to utilize and have access to the expertise of the field research team. Participants will also receive an unbiased, scientific baseline assessment of the potential sources of workplace exposure to nanomaterials using advanced instrumentation. Participants with a strong occupational safety and health (OSH) program could be used as role models for others in the nanotechnology field. For participants who are not sure about the strength of their OSH program, NIOSH can assist in prioritizing areas of improvement, such as engineering controls, and strengthening the overall program.

Note: This field research effort is fully funded by NIOSH; therefore, there is no monetary cost to the participant. In addition, there are federal laws and regulations that provide protection for the proprietary and trade secret information of the participating companies.

What is required of participants: The investment of the participants' time, availability, and access to participating worksites is required. Someone from the field research team will contact those who express interest in participating to determine if they meet the necessary qualifications. For those who qualify, a site visit will be scheduled. If new work practices or engineering control suggestions are implemented, or if modifications of existing practices or controls are made, then a return visit by NIOSH may occur to examine the effectiveness of those changes.



NIOSH monitoring of a worker during a nanomaterial powder production and collection.

Use of the data: The data collected by the field research team will be communicated back to the participant. It may then be used in a general manner by NIOSH to update its guidance on occupational safety and health implications of exposure to nanomaterials, and made available in technical documents, scientific presentations, or on the NIOSH Web site. Participants will not be identified in any NIOSH documents that are disseminated publicly without their permission.

For more information: To learn more about the NIOSH field research effort, or to express interest in participating, contact Charles Geraci, Ph.D., at (513) 533-8339, cgeraci@cdc.gov, or by mail at 4676 Columbia Parkway, Mail Stop C-32, Cincinnati, OH 45226. For information about other nanotechnology research efforts underway at NIOSH (such as the study of fine [$0.1\mu\text{m}$ to $2.5\mu\text{m}$ diameter] and ultrafine [$<0.1\mu\text{m}$ diameter] metal oxides), contact NIOSH toll-free at 1-800-CDC-INFO (800-232-46360 [press 1 to speak to an operator]), or visit the NIOSH Web site at www.cdc.gov/niosh.

Nanotechnology has many benefits that could be overshadowed if the risks are ignored. As a non-regulatory research agency, NIOSH focuses on

effective approaches to reducing occupational health and safety risks from exposure to nanomaterials, as well as conducting research and making recommendations to prevent work-related injury and illness for all workers.

To receive other documents or other information about occupational safety and health topics, contact NIOSH at

Telephone: 1-800-CDC-INFO (1-800-232-4636)

TTY: 1-888-232-6348 ■ E-mail: cdcinfo@cdc.gov

or visit the NIOSH Web site at www.cdc.gov/niosh

For a monthly update on news at NIOSH, subscribe to NIOSH *eNews* by visiting www.cdc.gov/niosh/eNews.

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As part of the Centers for Disease Control and Prevention, NIOSH is the Federal agency responsible for conducting research and making recommendations to prevent work-related illnesses and injuries. Fact sheets describe how worker exposures to hazardous agents or activities can be reduced.

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