



**U.S. Department of Energy  
Hanford Site**

16-SHD-0031

**JUN 20 2016**

Dr. John Howard, MD  
Director  
National Institute for Occupational Safety and Health  
Centers for Disease Control and Prevention  
Patriots Plaza 1  
395 E. Street SW  
Washington, D.C. 20201

Dr. Howard:

We very much appreciate the National Institute for Occupational Safety and Health (NIOSH) contacting the U.S. Department of Energy (DOE), Office of River Protection (ORP) on June 3, 2016, to discuss opportunities for NIOSH to provide assistance regarding Hanford Tank Farm worker safety and health programs. As you know, ORP staff have been communicating with NIOSH on a variety of topics including potential Health Hazard Evaluations, assistance with a recommendation pertaining to possible epidemiological studies, personal protective equipment, and exposure monitoring. ORP is very interested in working with NIOSH and appreciates your proposed plan to conduct a short-term, focused, evaluation in four programmatic areas. ORP has evaluated our ongoing Tank Farm worker safety and health program improvement actions to identify activities consistent with the proposed areas of interest identified by NIOSH and feel the plan (attached) addresses important DOE safety and health priorities. We also understand that during the conduct of the evaluation there may need to be modifications to the proposed course of action and we will work with you as necessary. The dates listed in the plan are the dates activities are scheduled that NIOSH may wish to observe. The dates are not completion dates for NIOSH activities.

The scope of the evaluation is not limited and includes all workers and organizations that work within, or in the proximity of, the Hanford Tank Farms. We understand that for NIOSH to conduct this evaluation, access to personnel (workers, managers, safety, health, and medical staff), records, and data is necessary, and DOE will ensure this information and personnel access is made available.

We understand and agree that all activities and communication will include labor and management representation to ensure transparency in conformance with the NIOSH regulations and policies. Prior to any site visit, a teleconference will be held with DOE, Union, and other appropriate representatives to ensure all involved understand and agree on NIOSH's role and objectives.

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Richland, Washington 99352**

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Your primary point-of-contact within ORP will be Mr. Brian Harkins, Deputy Assistant Manager, Technical and Regulatory Support, (509) 376-3567. Brian will be happy to resolve any questions and facilitate completion of these activities. We look forward to working with NIOSH on this evaluation.



Stacy Charboneau, Manager  
U.S. Department of Energy  
Richland Operations Office



Kevin W. Smith, Manager  
U.S. Department of Energy  
Office of River Protection

Attachment

cc w/attach:

L.D. Romine, North Wind Solutions LLC

**Attachment  
16-SHD-0031  
(2 Pages Excluding Cover Sheet)**

**Proposed NIOSH Action Plan for Technical Assistance**

**Hanford Tank Farms:  
Proposed NIOSH Action Plan for Technical Assistance**

In response to recent concerns associated with potential for exposures to chemical vapors on the U.S. Department of Energy's (DOE) Hanford Site in southeast Washington State, DOE Office of River Protection and the National Institute of Occupational Safety and Health (NIOSH) proposes conducting a short-term, focused, programmatic evaluation in the following areas:

1. **Medical:** NIOSH proposes to review current policies and operational procedures for evaluating worker health concerns for all employees associated with the Hanford Tank Farms. This review would include details concerning routine or targeted medical monitoring, clinical assessments performed in the event of health concerns associated with occupational exposures, recording of potential occupational health effects, management and analyses of the health data which are collected, and how individual and group information is communicated. NIOSH will review previous assessments of the occupational medicine program that have been conducted. NIOSH occupational medicine and epidemiological personnel will provide recommendations to DOE regarding the development of a statement of work for these activities as appropriate. During the evaluation, NIOSH will:
  - Review DOE's health effects clinical study design and management plan that was initiated in response to the April 25, 2016, NIOSH recommendation. (July)
  - Review of past occupational medicine assessments for comment or follow up. (June)
  - Meet with the Office of River Protection Vapor Management Expert Panel to review past Hanford Epidemiological studies relevant to tank farm workers.
  
2. **Exposure Assessment:** NIOSH proposes to review programs in place for monitoring worker exposure to chemical contaminants, including the development of sampling strategies, biological monitoring, real time and integrated sampling, identification of unknowns, data interpretation, reporting of results, responding to concerns regarding possible exposure, and managing the data for trend analysis. NIOSH is aware of the following current Office of River Protection projects and may observe/review these activities as a component of NIOSH's review:
  - Contractor headspace characterization methodology and results. (August/Sept.)
  - Tank farm trial Instrumentation data and operational value/viability. (June – Sept.)
  - Deployment strategy and application of summa canisters to better characterize emissions and exposures. (June – Sept.)
  - Tank farm air dispersion models and applications and integrations with the air monitoring strategy. (June)
  - DOE evaluation of the Savannah River Report bolus theory. (October)
  - DOE plans and progress to benchmark or modify personal sampling techniques to account for short, transient exposures. (June - October)
  
3. **Safety and Health Program Management:** NIOSH proposes to review policies and operational procedures regarding risk communication and labor-management interaction on health and safety issues, how issues regarding exposure monitoring are communicated and resolved, and mechanisms for worker reporting of safety concerns. NIOSH is aware the following items are currently ongoing and may review:

- The Pacific Northwest National Laboratory proposed Tank Farm Toxicity Review Board for Occupational Exposure Limits and Chemicals of Potential Concern development. (Fiscal Year 2017)
  - Industrial Hygiene and Industrial Hygiene Technician procedures, policies, and training needs. (July)
4. Exposure Control: NIOSH proposes to review the overall Hanford tank farm Site Control and Vapor Control Strategy, including the development, implementation, and assessment of engineering controls, personal protective equipment use, including respiratory protection, determination of the scope of restricted areas, and other, e.g., administrative, controls. NIOSH is aware the following items are currently ongoing and may review:
- Tank vapor and gas respirator cartridge test results and utilization plans (August/Sept./Oct.)

### **NIOSH Evaluation Team**

The NIOSH Western States Division in Spokane, Washington, would lead a NIOSH multi-disciplinary team to conduct the evaluation.

#### NIOSH Team Members:

Max Kiefer—Interim Director, Western States Division

Sam Glover—Supervisory Research Health Scientist, Chief, Biomonitoring and Health Assessment, Division of Applied Research and Technology

Barbara Alexander—Research Mechanical Engineer, Division of Applied Research and Technology

Bradley King—Industrial Hygienist, Western States Division

Yvonne Boudreau—Occupational Physician, Western States Division

### **Evaluation Report**

It is anticipated that one or more site visits will be necessary to fully evaluate the focus areas. Upon conclusion of the NIOSH evaluation, a letter report of findings and recommendations will be prepared and sent to DOE and worker representatives.