

August 18, 2009

Ms. Carolyn Hoskinson
Office Director
USEPA/OSWER/OUST
1200 Pennsylvania Avenue, N.W.
Mail Code 5401G
Washington, D.C. 20460

RE: Support of Continued Funding for USEPA ORD Research on Fuels

Dear Ms. Hoskinson:

The Association of State and Territorial Solid Waste Managers Officials (ASTSWMO) Leaking Underground Storage Tank (LUST) Task Force strongly supports continued funding from the U.S. EPA Office of Underground Storage Tanks (OUST) for additional fuels research by the USEPA Office of Research and Development (ORD). This work is of great value to State LUST Programs, which are continually seeking to protect public health and the environment, optimize current remediation projects and conduct more efficient site assessments and cleanups.

ORD and OUST have a long-standing relationship supporting collaboration on fuels research. Specifically, the scientific research conducted by Dr. John Wilson, Dr. James Weaver and Dr. Fran Kremer of ORD has provided a significant and valuable contribution to States' strategies for addressing LUST sites. This research includes detailed work in the areas of contaminant characterization, groundwater analytical methods, analysis of the fate and transport of fuel constituents in soil and groundwater and the development of remedial approaches.

Specific ORD completed project accomplishments that are value to States include:

- Detailed research on monitored natural attenuation (MNA) and development of a national protocol that provides specific guidance to State regulatory agencies on the use and documentation of MNA for LUST sites.
- Subsurface fate and transport and evaluation of remediation alternatives for methyl-tert-butyl-ether (MTBE), tert-butyl alcohol (TBA) and other fuel oxygenates.
- Documentation of anaerobic biodegradation of MTBE to TBA in groundwater.
- Documentation of the hydrolysis of MTBE to TBA by hydrochloric acid conventionally used to preserve groundwater samples.

- Research on the detection and prevalence of lead scavengers (EDB and 1,2-DCA) in soil and groundwater caused by releases of leaded gasoline at legacy LUST sites.
- In collaboration with the State of California, conducted the first field evaluation on transport and biotransformation of ethanol from spills of gasoline and the effect of ethanol on the size of BTEX plumes in groundwater.
- Research on the potential for generation of methane during biodegradation of ethanol.
- Carbon isotope analysis and other procedures for testing of LUST sites to document the occurrence of anaerobic biodegradation of MTBE.
- Development of the HSSM LNAPL model and on-line bio-attenuation calculators extensively used by State LUST regulators.
- Preliminary investigation of the variation in the chemical composition of gasoline at numerous sites throughout the United States.

Notably, the research on the characteristics of gasoline composition resulted in the first detailed analysis of current fuel constituents at gas stations that may contaminate the groundwater resources of the United States. The research included broad-scale analysis of hydrocarbons not limited to BTEX, fuel oxygenates and additives (MTBE, EDB, 1, 2-DCA, ethanol and ethanol blended fuels, other alcohols and ethers), and examination of geochemical weathering of fuels at old release sites. This research is crucial to assuring the States are conducting the proper sample analyses to safeguard public health and the environment.

The LUST Task Force would further like to emphasize the value of EPA OUST's continued financial support to ORD by providing funding for the following research projects listed in order of importance:

- Continued research regarding the variation in the chemical composition of gasoline at numerous sites throughout the United States.
- Monitoring benzene vapor attenuation and biodegradation in the unsaturated zone for evaluating the vapor intrusion pathway into occupied structures.
- On-going investigation into the compatibility of biofuels and alternative fuels with current Underground Storage Tank (UST) system components, especially at higher ethanol concentrations.
- Research into the effects on land and water quality impacts from ethanol spills (e.g., railcars and terminals).
- Development of a strategy for evaluating the performance of remediation technologies.

This ongoing research is extremely important to State programs for the following reasons:

- There is a significant need to integrate ongoing research on fuel composition, transport, biodegradation, vapor intrusion and impacts on water quality from fuels to improve risk management, leading to site closure and reuse of LUST sites. These efforts will support the goal of OUST to move state LUST sites to closure.

- States need the U. S. EPA to provide an unbiased detailed scientific analysis and expert opinion of technical issues that affect State LUST Programs. In most cases States have extremely limited capability or no resources to conduct independent research in these areas. Examples of current topics affecting State LUST Programs include bioattenuation of petroleum vapors in the subsurface (“vapor intrusion”), evaluation of the prevalence of lead scavengers in soil and groundwater, the impact of biofuels on existing plumes at LUST sites and the potential impact of biofuels on communities that are dependant on groundwater for drinking water.
- State LUST Programs need assistance in understanding what specific EPA Testing Methods should be used for soil and groundwater samples collected at LUST sites.

Finally, ORD research efforts have provided a strong forum for technical discussions of fuel related issues among the American Petroleum Institute (API), the United States Geological Survey (USGS), the National Water Quality Assessment (NAWQA) Program, U. S. EPA’s Office of Ground Water and Drinking Water (OGWDW), U.S. EPA’s Office of Air and Radiation (OAR), the North Atlantic Treaty Organization (NATO) and the Brazilian government. ORD’s science contributions in this forum have helped to lead the broader research agenda on fuels nationally and internationally in the development of risk management approaches. With this forum OUST will be better equipped to provide industry and federal agencies with comment on national policy issues for LUST sites to provide industry, federal agencies and State agencies with the ability to comment on national policy issues for LUST sites.

In summary, the ASTSWMO LUST Task Force strongly supports EPA OUST’s continued support for ORD’s fuels research. This work is of great value to State LUST Programs, which are continually seeking to protect human health and the environment, optimize existing remediation projects and conduct more complete and consistent site assessments and cleanups. Finally, the ASTSWMO LUST Task Force supports a more formal agreement among ORD and OUST, to create a long term fuels research agenda, providing stability and continuity in support of these critical research efforts.

Sincerely,



Russ Brauksieck, NY
Vice-Chair of the Tanks Subcommittee



Jeffrey A. Kuhn, MT
LUST Task Force Chair

cc: Adam Klinger, USEPA OUST