



DEPARTMENT OF THE ARMY  
US ARMY INSTITUTE OF PUBLIC HEALTH  
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MCHB-IP-RDE

10 OCT 2012

MEMORANDUM FOR Office of the Command Surgeon (LTC (b) (6)), U.S. Central Command, 7115 South Boundary Boulevard, MacDill Air Force Base, FL 33621-5101

SUBJECT: Deployment Occupational and Environmental Health Surveillance Sample Report, Airborne Volatile Organic Compounds, Sherwali, Afghanistan, 2 July 2012, U\_AFG\_SHERWALI\_IP\_A17\_20120702

1. The enclosed report details the assessment of two volatile organic compound air samples collected by 792d Medical Detachment personnel, Sherwali, Afghanistan, 2 July 2012.
2. None of the chemicals detected in the samples were identified as potential hazards.

FOR THE DIRECTOR:

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Encl

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Portfolio Director, Health Risk Management

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## **U.S. ARMY PUBLIC HEALTH COMMAND**

5158 Blackhawk Road, Aberdeen Proving Ground, Maryland 21010-5403

**Deployment Occupational and Environmental Health Surveillance  
Sample Report,  
U\_AFG\_SHERWALI\_IP\_A17\_20120702  
Health Risk Management Portfolio**

**Airborne Volatile Organic Compounds, Sherwali, Afghanistan**

**Prepared by (b) (6)  
Deployment Environmental Surveillance Program**

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**Preventive Medicine Surveys: 40-5f1**

## ACKNOWLEDGEMENTS

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**Deployment Occupational and Environmental  
Health Surveillance Sample Report  
Airborne Volatile Organic Compounds  
Sherwali, Afghanistan  
2 July 2012  
U\_AFG\_SHERWALI\_IP\_A17\_20120702**

## **1 References**

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See Appendix A for a list of references.

## **2 Purpose**

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This report provides the U.S. Army Public Health Command (USAPHC), Army Institute of Public Health (AIPH) assessment of the laboratory analytical results and exposure information associated with the samples collected by 792d Medical Detachment personnel on 2 July 2012 at Sherwali, Afghanistan according to the U.S. Department of Defense deployment occupational and environmental health (DOEH) surveillance requirements. The assessment serves several purposes. It identifies DOEH hazards that may be related to acute health effects that could occur in personnel during their deployment. It provides an official record of observed exposure conditions for use in future site evaluations. It identifies whether or not there is a potential for chronic health concerns which may require additional characterization. Finally, this report includes preventive steps to reduce or eliminate occupational and environmental exposures, and surveillance and/or sampling recommendations, as necessary.

## **3 Scope**

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The assessment of sample results and exposure information in this report follows the process published in the USAPHC Technical Guide (TG) 230 "Environmental Health Risk Assessment and Chemical Exposure Guidelines for Deployed Military Personnel, June 2010 Revision." The assessment is based on limited data representing a specific time period and assesses short-term exposure risks only. Therefore, this report cannot be used alone to estimate the risk of chronic health effects from exposures. In addition, this assessment does not address all DOEH hazards to which U.S. personnel may be exposed.

## **4 Laboratory Analysis**

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These deployment air samples were analyzed at the USAPHC, AIPH laboratory for a standard set of volatile organic compounds (VOCs). The complete analytical sample results can be viewed in the Defense Occupational and Environmental Health Readiness System (DOEHRS). Log into the DOEHRS and search for the samples using the DOEHRS sample identification numbers (IDs) provided in Table 1.

**Table 1. Sample Identification Information**

DOEHRS Sample ID	Sample ID Reported on Field Data Sheet	Sample Site	Date and Time Sample Collected	Sampling Duration	Sample Invalid (Yes/No) Reason for Invalid Sample
0000788X	AFG_WALIFB_20120702_DVS 02-2	US Guard Tower	2012/07/02 0630	480.0 minutes	No
0000788Z	AFG_WALIFB_20120702_DVS 01	US Guard Tower	2012/07/02 0630	480.0 minutes	No

## 5 Exposure Setting

Table 2 contains information about the sampling location, environmental conditions, and associated potential population exposure. The information was provided on the field data sheets and/or exposure assessment worksheet submitted with the samples unless otherwise noted. Correction and clarification of exposure assumptions by the sampling unit is encouraged.

**Table 2. Exposure Information**

Questions About Exposure	Information Provided and Assumptions
Why was this sample/sample set collected?	Routine sampling of Volatile Organic Compounds (VOCs) in the ambient air pathway as described in the Occupational and Environmental Health Site Assessment (OEHS).
What population is exposed and how?	The majority of basecamp personnel are exposed to the ambient air. However, it is assumed that personnel spend part of each day indoors.
What is the timeframe under consideration?	Although personnel will be deployed to this location for approximately 1 year, only the 8 hour time frame in which the samples were taken is being assessed.
Where was the sample/sample set collected?	The samples were collected from the guard tower near the burn pit.
What is known about location, activity, setting and potential sources of contamination that may affect exposure?	The burn pit is less than 40 feet from the guard tower. The burn pit is active between 0600 hours and 0900 hours every day. Metals are not burned in the burn pit. Only water bottles, paper plates, plastic bags with human fecal waste, and food are burned.

## **6 Prescreen**

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None of the chemicals detected in the samples were identified as potential hazards because their concentrations were not greater than USAPHC TG 230 military exposure guidelines (MEGs). The prescreening is conducted as described in USAPHC TG 230, section 3.4.3. The sample results were compared to MEGs on 7 August 2012.

## **7 Limitations**

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### **7.1 Field Data Quality**

Field data provided with the samples were adequate.

None of the samples were invalid.

### **7.2 Sample Receipt at USAPHC Laboratory**

The sample set was received at the USAPHC at a temperature of 28 degrees Celsius. The samples were packaged correctly.

### **7.3 Laboratory Data Quality**

No laboratory data quality issues associated with this sample set were identified.

## **8 Recommendations**

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Maintain communication with USAPHC, AIPH points of contact (POCs) and continue standard surveillance of airborne VOCs in accordance with defined Occupational and Environmental Health Site Assessment (OEHSA) Exposure Pathways and sampling plans for your location.

An OEHSA was completed for Sherwali, Afghanistan on 4 July 2012. Update the OEHSA annually or as the exposure scenario changes.

## 9 Points of Contact

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The USAPHC, AIPH POCs for this assessment are Ms. (b) (6) and Ms. (b) (6). Ms. (b) (6) may be contacted at e-mail (b) (6) and Ms. (b) (6) may be contacted at e-mail (b) (6), or DSN (b) (6) or commercial (b) (6).

(b) (6)

Environmental Scientist  
Deployment Environmental Surveillance  
Program

Approved by:

(b) (6)

Acting Program Manager  
Deployment Environmental Surveillance

## Appendix A

### References

Department of Defense. 2004. Department of Defense Directive 6490.02E, *Comprehensive Health Surveillance*. <http://www.dtic.mil/whs/directives/corres/pdf/649002Ep.pdf>

Department of Defense. 2006. Department of Defense Instruction 6490.03, *Deployment Health*. <http://www.dtic.mil/whs/directives/corres/pdf/649003p.pdf>

Department of the Army. 2006. Field Manual 5-19, *Composite Risk Management*. <https://rdl.train.army.mil/soldierPortal/atia/adlsc/view/public/23137-1/FM/5-19/TOC.HTM>

U.S. Army Public Health Command 2010 (Provisional). Technical Guide 230, *Chemical Exposure Guidelines for Deployed Military Personnel*. <http://phc.amedd.army.mil/PHC%20Resource%20Library/TG230.pdf>