



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

2 August 2013

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, Bagram, Afghanistan, 9 May 2013,  
U\_AFG\_BAGRAM\_IP\_A17\_20130509

1. The enclosed report details the assessment of two volatile organic compound air samples collected by 788th Medical Detachment personnel, Bagram, Afghanistan, 9 May 2013.
2. No chemicals were detected in the samples.

FOR THE DIRECTOR:

(b) (6)

Encl

Portfolio Director, Health Risk Management

CF: (w/encl)

788th MED DET (Commander/MAJ (b) (6))  
ARCENT (Chief, Force Health Protection/COL (b) (6))  
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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\_BAGRAM\_IP\_A17\_20130509  
Health Risk Management Portfolio**

**Airborne Volatile Organic Compounds, Bagram, Afghanistan**

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

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## **ACKNOWLEDGEMENTS**

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**Deployment Occupational and Environmental  
Health Surveillance Sample Report  
Airborne Volatile Organic Compounds  
Bagram, Afghanistan  
9 May 2013  
U\_AFG\_BAGRAM\_IP\_A17\_20130509**

## **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 788th Medical Detachment personnel on 9 May 2013 at Bagram, 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. 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.

DOEH Surveillance Sample Report, Airborne VOCs, Bagram, Afghanistan, 9 May 13,  
U\_AFG\_BAGRAM\_IP\_A17\_20130509

**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
000096H8	AFG_BAGRAM_2 0130509_DVS01	Road side between burn pit and Camp Mac	2013/05/09 2225	480.0 minutes	No
000099IW	AFG_BAGRAM_2 0130509_DVS02	Road side between burn pit and Camp Mac	2013/05/09 2225	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?	These samples were collected to characterize exposure to VOCs near the burn pit and Camp Mac.
What population is exposed and how?	The majority of personnel are exposed to the ambient air. However, it is assumed that personnel spend part of each day indoors. Personnel living and working near the sample site are considered the most exposed.
What is the timeframe under consideration?	Personnel will be deployed to this location for approximately one year. The sample is meant to represent a typical overnight burn.
Where was the sample/sample set collected?	The sample was collected by the road side between the burn pit and Camp Mac.
What is known about location, activity, setting and potential sources of contamination that may affect exposure?	Sample collection occurred overnight during an active evening burn. The burn pit is active 24 hours daily. Smoke drifts low to populated areas in the evening. There are concrete plants located on Bagram.

## **6 Prescreen**

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None of the chemicals were detected in the samples, and therefore there were no potential hazards identified. The prescreening is conducted as described in USAPHC TG 230, section 3.4.3. The sample results were compared to MEGs on 11 June 2013.

## **7 Limitations**

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### **7.1 Field Data Quality**

Field data provided with the samples were adequate.

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

The sample set was received at the USAPHC at a temperature of 22 degrees Celsius.

### **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 Bagram, Afghanistan on 20 December 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).

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