



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

11 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, Soil, Sher Wali, Afghanistan, 2 July 2012,
U_AFG_SHERWALI_IP_SQA_20120702

1. The enclosed report details the assessment of one soil sample collected by 792d Medical Detachment personnel, Sher Wali, Afghanistan, 2 July 2012.
2. None of the chemicals detected in the sample were identified as potential hazards.

FOR THE DIRECTOR:

(b) (6)

Encl

Portfolio Director, Health Risk Management

CF: (w/encl)

792d MED DET (PM) (Commander/MAJ (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_SHERWALI_IP_SQA_20120702
Health Risk Management Portfolio**

Soil, Sher Wali, Afghanistan,

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

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Preventive Medicine Surveys: 40-5f1

CHPPM/PHC FORM 433-E (MCHB-CS-IP), SEP 10

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ACKNOWLEDGEMENTS

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**Deployment Occupational and Environmental
Health Surveillance Sample Report
Soil
Sher Wali, Afghanistan
2 July 2012
U_AFG_SHERWALI_IP_SQA_20120702**

1 References

See Appendix A for a list of references.

2 Purpose

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 sample collected by 792d Medical Detachment on 2 July 2012 at Sher Wali, 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

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. This report, therefore, 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

Deployment soil samples received at the USAPHC, AIPH laboratory are analyzed for a standard set of parameters that includes metals, pesticides/polychlorinated biphenyls, herbicides, semivolatile organic compounds, inorganic chemicals, radionuclides, and various physical characteristics. 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 sample using the DOEHRS sample identification number (ID) provided in section 5.

5 Exposure Setting

Table 1 contains information about the sampling location, environmental conditions, and associated potential population exposure. The information was provided on the field data sheet and/or exposure assessment worksheet submitted with the sample unless otherwise noted. The composite soil sample was collected on 2 July 2012 at Sher Wali, Afghanistan. The sample was

DOEH Surveillance Sample Report, Soil, Sher Wali, Afghanistan, 2 Jul 12,
U_AFG_SHERWALI_IP_SQA_20120702

identified on the field data sheet as AFG_WALIFB_20120702_01S; the sample is associated with sample ID 00007706 in the DOEHRs.

Table 1. Exposure Information

Questions About Exposure	Information Provided and Assumptions
Why was this sample/sample set collected?	Routine sampling of soil.
What population is exposed and how?	The sample was taken in common work and living areas where Soldiers frequently walk.
What is the timeframe under consideration?	Deployment duration of 9 months unless subsequent activities change or contamination occurs.
Where was the sample/sample set collected?	From the guard tower, gun 3 and 4, smoke pit, and the helicopter landing zone.
What is known about location, activity, setting and potential sources of contamination that may affect exposure?	Burn pit is less than 40 feet to the east of the guard tower. Everything but metals is burned in the burn pit.

6 Prescreen

Table 2 shows whether parameters are identified as potential hazards because their sample concentration is greater than their most health-protective screening level USAPHC TG 230 military exposure guidelines (MEGs). Potential hazards are further assessed to determine if they are acute hazards. Parameters analyzed but not shown in Table 2 are not considered hazards. The prescreening is conducted as described in USAPHC TG 230, section 3.4.3. The sample results were compared to MEGs on 13 August 2012.

Table 2. Results of Prescreen

Parameter	Sample Concentration (mg/kg)	1-year Negligible MEG (mg/kg)	Result
Barium	81	14801	Exclude as potential hazard
Chromium	23	297840	Exclude as potential hazard
Di(2-ethylhexyl)phthalate	3.2	35354	Exclude as potential hazard
Nickel	25	4242.4	Exclude as potential hazard
Strontium	320	424240	Exclude as potential hazard

Legend: mg/kg = milligrams per kilogram

7 Conclusion

None of the chemicals detected in the sample were identified as potential hazards because the concentrations were not greater than USAPHC TG 230 MEGs.

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10 Points of Contact

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)

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Program

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