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

SUBJECT: Deployment Occupational and Environmental Health Surveillance Sample Report, Soil, Musa Qe’Lah, Afghanistan, 18 December 2010, U_AFG_MUSAQELAH_CM_SQA_20101218

1. The enclosed report details the deployment occupational and environmental health risk characterization derived from one soil sample and two ash samples collected by Marine Expeditionary Force personnel, Musa Qe’Lah, Afghanistan, 18 December 2010.

2. None of the chemicals detected in the samples were identified as potential hazards.

FOR THE DIRECTOR:

Encl

Portfolio Director, Health Risk Management

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Deployment Occupational and Environmental Health Surveillance Sample Report,
U_AFG_MUSAQELAH_CM_SQA_20101218
Health Risk Management Portfolio

Soil, Musa Qe’Lah, Afghanistan, 18 December 2010

Prepared by [(6)]
Deployment Environmental Surveillance Program

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information evaluating another command; March 2011. Requests for this document must be
referred to Office of the Command Surgeon, U.S. Central Command, 7115 South Boundary
Boulevard, MacDill Air Force Base, FL 33621-5101.
ACKNOWLEDGMENTS

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DEPLOYMENT OCCUPATIONAL AND ENVIRONMENTAL HEALTH SURVEILLANCE SAMPLE REPORT
SOIL
MUSA QE’LAH, AFGHANISTAN
18 DECEMBER 2010
U_AFG_MUSAQELAH_CM_SQA_20101218

1 References
See Appendix A for a list of references.

2 Purpose
According to the U.S. Department of Defense deployment occupational and environmental health (OEH) surveillance requirements, this document assesses the potential OEH risks associated with the environmental exposure to chemical hazards by deployed U.S. personnel. This report is intended to identify potential sources of particular health effects that may develop during a population's deployment, identify areas where preventive steps can be taken to mitigate future environmental exposure, and document exposure conditions for future inquiries.

3 Scope
This report utilizes published information and guidance resources, information provided on field data sheets, and laboratory analyses to assess chemical hazards for the associated sample set. This assessment does not address all deployment OEH hazards to which U.S. personnel may be exposed.

4 Laboratory Analysis
Deployment soil samples received at the U.S. Army Public Health Command (Provisional) (USAPHC (Prov)), Army Institute of Public Health (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-Environmental Health (DOEHRS-EH). Log into the DOEHRS-EH and search for the samples using the DOEHRS sample identification numbers (IDs) provided in section 5.

Deployment ash samples received at the U.S. Army Public Health Command (Provisional) (USAPHC (Prov)), Army Institute of Public Health (AIPH) laboratory are analyzed for semivolatile organic compounds, herbicides, pesticides, and metals using the Toxicity Characteristic Leaching Procedure (TCLP). Although volatile organic compounds are among the chemicals listed in 40 CFR 261.3 Table 1 “Maximum Concentration of Contaminants for the Toxicity Characteristic,” they are not included in the standard USAPHC (Prov) laboratory analytical suite because it is assumed they are not present in the ash resulting from the incineration process. The samples were separately analyzed for polychlorinated biphenyls (PCBs). The complete analytical sample results can be viewed in the Defense Occupational and Environmental Health Readiness System-Environmental Health (DOEHRS-EH). Log into the DOEHRS-EH and search for the samples using the DOEHRS sample identification numbers (IDs) provided in Section 5.
5 Exposure Setting

Information about the samples and population exposure setting were provided on the field data sheets submitted with the samples unless otherwise noted. The soil and ash samples were collected on 18 December 2010 at Musa Qe’Lah, Afghanistan. The samples were collected from around the burn pit and berthing areas because the ashes from the burn pit can potentially travel throughout the camp due to sand storms and wind conditions during this time of the year. It is an arid environment and the ashes/soil stick to the skin, uniform and boots. Marines are burning human waste in the burn pit area. The Marines wear paper masks and stir the waste several times during the process. The burning process takes place at least 3 times per day depending upon camp population.

The ash sample identified on the field data sheet as AFG_MSQ_10352_01S is associated with sample ID 00003SIB in the DOEHRS-EH. The composite sample was collected from an area near the burn pit. All personnel generally deploy to this location for approximately 1 year.

The ash sample identified on the field data sheet as AFG_MSQ_10352_02S is associated with sample ID 00003SIG in the DOEHRS-EH. The discrete sample was collected from an area near the burn barrels. All personnel generally deploy to this location for approximately 1 year.

The soil sample identified on the field data sheet as AFG_MSQ_10352_03S is associated with sample ID 00003SII in the DOEHRS-EH. The discrete sample was collected from the berthing area. All personnel generally deploy to this location for approximately 1 year.

6 Prescreen

None of the chemicals detected in the samples were identified as potential hazards because the concentrations did not exceed USAPHC (Prov) Technical Guide (TG) 230 military exposure guidelines (MEGs). The sample results were compared to MEGs on 15 February 2011.

7 Limitations

7.1 Field Data Quality

The field data sheet provided with the samples was adequately filled out.

7.2 Sample Receipt at USAPHC (Prov) Laboratory

The samples were received at the USAPHC (Prov) at a temperature of 12 degrees Celsius. The samples were packaged correctly and no sample containers were broken during shipment.

Sample jars were only one-third full when received at the lab.

7.3 Laboratory Data Quality

Some parameters in this data set are flagged with a J code (J). This code indicates an estimated value that was detected above the Method Detection Limit but below the Method Reporting Limit (also known as Limit of Quantitation or Practical Quantitation Limit).
Two of the three samples (AFG_MSQ_10352_01S and AFG_MSQ_10352_02S) received only Toxicity Characteristic Leaching Procedure analysis due to the determination that samples were ash rather than soil. The third sample (AFG_MSQ_10352_03S) received a full soil suite analysis with the exception of radiation analysis due to the partial filling of the sample jar.

8 Recommendations

Due to reduced volume laboratory analysis, it is imperative that the sample jars be filled completely. If the jars are not completely filled, a complete laboratory analysis cannot be completed.

Maintain communication with USAPHC (Prov), AIPH points of contact (POCs) and continue standard surveillance of soil exposures in accordance with defined OEH Site Assessment Exposure Pathways and sampling plans for your location.

9 Points of Contact

The USAPHC (Prov), 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


