DEPARTMENT OF THE ARMY
US ARMY PUBLIC HEALTH COMMAND (PROVISIONAL)
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND MD 21010-5403

MCHB-TS-RDE

01 APR 2010

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

SUBJECT: Deployment Occupational and Environmental Health Risk Characterization, Ambient Air Volatile Organic Compound Samples, Sharana, Afghanistan, 26 November-12 December 2009, U_AFG_SHARANA_CM_A17_20091212

1. The enclosed report details the occupational and environmental health (OEH) risk characterization for 16 valid ambient air volatile organic compound (VOC) samples collected by Charlie Company 725th Brigade Support Battalion personnel from Sharana, Afghanistan, 26 November-12 December 2009.

2. None of the VOCs detected in the samples were present at concentrations greater than their respective military exposure guidelines. The OEH risk estimate for exposure to VOCs in the ambient air at Sharana, Afghanistan is **low**. Exposure to the ambient air at the sampled site is expected to have little or no impact on unit readiness.

FOR THE COMMANDER:

(b) (6)

Encl

(b) (6)
Director, Health Risk Management

CF: (w/encl)
725th BSB, Preventive Medicine/2LT (b) (6)
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U.S. Army Public Health Command
(Provisional)

USAPHC

DEPLOYMENT OCCUPATIONAL AND ENVIRONMENTAL HEALTH RISK CHARACTERIZATION AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES SHARANA, AFGHANISTAN 26 NOVEMBER-12 DECEMBER 2009 U_AFG_SHARANA_CM_A17_20091212

Preventive Medicine Survey: 40-5f1

DEPLOYMENT OCCUPATIONAL AND ENVIRONMENTAL
HEALTH RISK CHARACTERIZATION
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009
U_AFG_SHARANA_CM_A17_20091212

1. REFERENCES. See Appendix A for a list of references.

2. PURPOSE. According to U.S. Department of Defense medical surveillance requirements, this occupational and environmental health (OEH) risk characterization documents the identification and assessment of chemical hazards that pose potential health and operational risks to deployed troops. Specifically, the samples and information provided on the associated field data sheets were used to estimate the operational health risk associated with exposure to identified chemical hazards in the air at Sharana, Afghanistan.

3. SCOPE. This assessment addresses the analytical results of sixteen valid ambient air volatile organic compound (VOCs) samples collected from Sharana, Afghanistan, 26 November-12 December 2009. These samples are limited in time, area, and media. Therefore, this report should not be considered a complete assessment of the overall OEH hazards to which troops may be exposed at this location. However, this assessment has been performed using operational risk management (ORM) doctrine Field Manual (FM) 5-19 and the relatively conservative (protective) assumptions and methods provided in U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Technical Guide (TG) 230 to facilitate decision making that can minimize the likelihood of significant risks.

4. BACKGROUND AND EXPOSURE ASSUMPTIONS. The samples were collected to assess the potential for adverse health effects to troops routinely and continuously breathing the ambient air at Sharana, Afghanistan. The samples were collected around the burn pit and guard tower. The burn pit was actively burning during the sampling event. It is expected that less than 10 percent of the personnel will be exposed to the ambient air for deployment durations of less than 1 year. No adverse weather conditions were reported during the sampling event. In addition, it is assumed that control measures and/or personal protective equipment are not used.

5. METHOD. The U.S. Army Public Health Command (Provisional) (USAPHC (Prov)), formerly USACHPPM, Deployment Environmental Surveillance Program uses the USACHPPM TG 230 methodology and associated military exposure guidelines (MEGs)

to assess identified hazards and estimate risk in a manner consistent with doctrinal risk management procedures and terminology. This method includes identification of the hazard(s), assessment of the hazard severity and probability, and determination of a risk estimate and associated level of confidence. As part of the hazard identification step, the long-term (1-year) MEGs are used as screening criteria to identify those hazards that are potential health threats. These 1-year MEGs represent exposure concentrations at or below which no significant health effects (including delayed or chronic disease or significant increased risk of cancer) are anticipated even after 1 year of continuous daily exposures. Short-term MEGs are used to assess one time or intermittent exposures. The underlying toxicological basis for the MEGs is addressed in the USACHPPM Reference Document (RD) 230. Since toxicological information about potential health effects varies among different chemicals, the determination of severity of effects when MEGs are exceeded involves professional judgment. Hazards with exposure concentrations greater than MEGs are identified as potential health threats, carried through the hazard assessment process, and assigned a risk estimate consistent with ORM methodology. Hazards that are either not detected or are present only at levels below the 1-year MEGs are not considered health threats and, therefore, are automatically assigned a low operational risk estimate.

6. HAZARD IDENTIFICATION.

a. Sample Information. Twenty-one ambient air VOC samples collected with the Deployable Volatile Sampler (DVS) were submitted for analysis. The 21 samples and associated field blanks were collected on 26 November-12 December 2009. Five of the samples were invalid due to flow differentials. (DVS is a trademark of SKC, Inc.)

b. Laboratory Analysis. The 16 valid samples and field blanks were analyzed by the USAPHC (Prov) laboratory for VOCs. Concentrations of VOCs detected above the laboratory reporting limit were compared to MEGs presented in USACHPPM TG 230. Appendix B provides an information summary of the samples assessed in this report. Appendix C contains a summary of the sample results. Appendix D presents detailed laboratory results.

c. Risk Estimate. None of the VOCs detected in the samples were present at concentrations greater than their respective MEGs. Therefore, no potential health threats were identified and the risk estimate for exposure to VOCs in the ambient air is considered **low**.

7. CONCLUSION. The OEH risk estimate for exposure to VOCs in the ambient air around the burn pit and guard tower at Sharana, Afghanistan is **low**. Exposure to VOCs in the ambient air at the sampled sites is expected to have little or no impact on unit

readiness. Using USACHPPM TG 230, Table 3-5 as a guide, confidence in the risk estimate is considered low. In general, the confidence level in risk estimates is usually low to medium due to consistent lack of specific exposure information associated with troop movement and activity patterns; other routes/sources of potential OEH hazards not identified; and uncertainty regarding impacts of multiple chemicals present, particularly those affecting the same body organs/systems.

8. RECOMMENDATION AND NOTES.

a. Recommendation. Continue to collect samples from Sharana Afghanistan at least once every 6 days for the deployment duration (or as long as possible) to better characterize VOC concentrations in the ambient air to which personnel are typically exposed, and to increase confidence in risk estimates at this location.

b. Notes.

(1) This OEH risk assessment is specific to the exposure assumptions identified above and the sample results assessed in this report. If the assumed exposure scenario changes, provide updated information so that the risk estimate can be reassessed. If additional samples from Sharana Afghanistan are collected, a new OEH risk assessment will be completed.

(2) As part of a Comprehensive Military Medical Surveillance Program, required by Department of Defense Directive 6490.02E and Department of Defense Instruction 6490.03, this report has been submitted to the Deployment Occupational and Environmental Health Surveillance (DOEHS)-Data Portal. You can view this and other archived DOEHS data at https://doehrswww.apgea.army.mil/doehrs-oehs/. If you have additional DOEHS data for Sharana, Afghanistan it can also be submitted via this Web site.

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

9. POINTS OF CONTACT. The USACHPPM points of contact for this assessment are Ms. (b) (6) and Mr. (b) (6). Ms. (b) (6) may be contacted at e-mail (b) (6) Mr. (b) (6) may be contacted at e-mail (b) (6) or DSN (b) (6) or commercial (b) (6)

For (b) (6)
Environmental Scientist
Deployment Environmental Surveillance Program

Approved by:

(b) (6)
MAJ, MS
Program Manager
Deployment Environmental Surveillance

APPENDIX A

REFERENCES

1. Department of Defense Directive (DODD) 6490.02E, Comprehensive Health Surveillance, 21 October 2004.

2. Department of Defense Instruction (DODI) 6490.03, Deployment Health, 11 August 2006.

3. Department of the Army, Field Manual (FM) 5-19, Composite Risk Management, 21 August 2006.

4. U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Technical Guide (TG) 230, Chemical Exposure Guidelines for Deployed Military Personnel, Version 1.3, May 2003 with the January 2004 addendum.

5. USACHPPM Reference Document (RD) 230, Chemical Exposure Guidelines for Deployed Military Personnel, Version 1.3, May 2003 with January 2004 addendum.

APPENDIX B

INFORMATION SAMPLING SUMMARY
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009

DOEHRS Sample ID	Field/Local Sample ID	Site	Start Date/Time	Sample Duration	Invalid Sample
00001SQK	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/12 1055	442.0 minutes	No
00001SQM	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/12 1055	442.0 minutes	No
00001SQO	AFG_SHARAN_09330_TO17	Burn Pit	2009/11/26 0949	482.0 minutes	Yes, Flow differential
00001SR6	AFG_SHARAN_09330_TO17	Burn Pit	2009/11/26 1007	466.0 minutes	No
00001SRB	AFG_SHARAN_09331_TO17	Burn Pit	2009/11/27 1042	486.0 minutes	No
00001SRM	AFG_SHARAN_09331_TO17	Burn Pit	2009/11/27 1042	486.0 minutes	No
00001SRS	AFG_SHARAN_09332_TO17	Burn Pit	2009/11/28 1054	448.0 minutes	No
00001SRY	AFG_SHARAN_09332_TO17	Burn Pit	2009/11/28 1054	448.0 minutes	No
00001SS2	AFG_SHARAN_09334_TO17	Burn Pit	2009/11/30 0953	474.0 minutes	No
00001SS6	AFG_SHARAN_09334_TO17	Burn Pit	2009/11/30 0953	474.0 minutes	No
00001SS7	AFG_SHARAN_09334_TO17	Guard Tower	2009/11/30 0923	480.0 minutes	Yes, Flow differential
00001SS9	AFG_SHARAN_09334_TO17	Guard Tower	2009/11/30 0923	480.0 minutes	No
00001SSI	AFG_SHARAN_09345_TO17	Guard Tower	2009/12/11 1019	460.0 minutes	No
00001SSM	AFG_SHARAN_09345_TO17	Guard Tower	2009/12/11 1019	460.0 minutes	No

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID	Field/Local Sample ID	Site	Start Date/Time	Sample Duration	Invalid Sample
00001SWS	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/11 1051	442.0 minutes	No
00001SWU	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/11 1051	442.0 minutes	No
00001SWX	AFG_SHARAN_09354_TO17	Guard Tower	2009/12/12 1005	477.0 minutes	No
00001SX0	AFG_SHARAN_09354_TO17	Guard Tower	2009/12/12 1005	477.0 minutes	Yes, Flow differential
00001SX3	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/12 1035	457.0 minutes	No
00001SX8	AFG_SHARAN_09346_TO17	Burn Pit	2009/12/12 1035	1814.0 minutes	Yes, Flow differential
00001SXB	AFG_SHARAN_09332_TO17	Guard Tower	2009/11/28 1005	484.0 minutes	Yes, Flow differential

LEGEND:
DOEHRS Sample ID = Defense Occupational and Environmental Health Readiness System Sample Identification Number

APPENDIX C

SAMPLE RESULTS SUMMARY
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009

Parameter	Units	Concentration		Valid Samples		USACHPPM TG 230 Military Exposure Guidelines[2] 1-year	
		Maximum	Average[1]	#	# > Laboratory Reporting Limit	# > MEG	MEG
1,2,4-Trimethylbenzene	µg/m^3	10.076	3.0902	16	11	0	3100
1,2-Dichloroethane	µg/m^3	0.94656	0.3569	16	2	0	180
1,3,5-Trimethylbenzene	µg/m^3	3.0229	0.94601	16	6	0	3100
1,3-Dichlorobenzene	µg/m^3	0.5568	0.29184	16	1	No MEG	
4-Isopropyltoluene	µg/m^3	0.92021	0.4162	16	4	No MEG	
Benzene	µg/m^3	28.397	5.9198	16	14	0	39
Cyclohexane	µg/m^3	0.61347	0.29681	16	1	0	4100
Cyclopentane	µg/m^3	24.765	2.9539	16	5	0	42000
Decane	µg/m^3	40.154	10.737	16	14	No MEG	
Ethylbenzene	µg/m^3	11.136	2.2186	16	11	0	3000
Hexane	µg/m^3	2.2829	0.8972	16	10	0	4300
m,p-Xylene	µg/m^3	6.7176	2.1386	16	12	No MEG	

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

Parameter	Units	Concentration		Valid Samples		USACHPPM TG 230 Military Exposure Guidelines[2] 1-year	
		Maximum	Average[1]	#	# > Laboratory Reporting Limit	# > MEG	MEG
Methylcyclopentane	µg/m^3	0.98149	0.35249	16	2	No MEG	
Methylene chloride	µg/m^3	4.4036	0.63682	16	4	0	2100
n-Butylbenzene	µg/m^3	1.6821	0.60649	16	4	0	96
n-Propylbenzene	µg/m^3	2.2247	0.72505	16	5	0	25
o-Xylene	µg/m^3	3.9746	1.278	16	7	0	11000
sec-Butylbenzene	µg/m^3	0.8397	0.38919	16	4	0	25
Styrene	µg/m^3	33.965	5.3552	16	13	0	2000
Toluene	µg/m^3	14.477	3.3847	16	14	0	4600

[1]Where parameters are not detected in a sample during analyses, half of the laboratory reportable limit is used in the average.
[2]This table was created from DOEHRS on 8 February 2010. The MEGs in DOEHRS are current as of June 2009.

LEGEND:
µg/m^3 = micrograms per cubic meter
USACHPPM = U.S. Army Center for Health Promotion and Preventive Medicine
TG = technical guide
MEGs = military exposure guidelines

APPENDIX D

DETAILED LABORATORY SAMPLE RESULTS
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009

DOEHRS Sample ID			00001SQK	00001SQM	00001SR6	00001SRB	00001SRM
Field/Local Sample ID			AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09330_TO17	AFG_SHARAN_09331_TO17	AFG_SHARAN_09331_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Burn Pit
Start Date/Time			2009/12/12 1055	2009/12/12 1055	2009/11/26 1007	2009/11/27 1042	2009/11/27 1042
Parameter	Class	Units	Concentration[1,2]				
1,1,1,2-Tetrachloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1,1-Trichloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1,2,2-Tetrachloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1,2-Trichloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1-Dichloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1-Dichloroethene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,1-Dichloropropene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2,3-Trichlorobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2,3-Trichloropropane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2,4-Trichlorobenzene	SVOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2,4-Trimethylbenzene	VOC	µg/m^3	9.7133	10.076	0.74244	2.2617	2.4694
1,2-Dibromo-3-chloropropane	VOC	µg/m^3	< 1.2781	< 1.3995	< 1.3258	< 1.3149	< 1.2862

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SQK	00001SQM	00001SR6	00001SRB	00001SRM
Field/Local Sample ID			AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09330_TO17	AFG_SHARAN_09331_TO17	AFG_SHARAN_09331_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Burn Pit
Start Date/Time			2009/12/12 1055	2009/12/12 1055	2009/11/26 1007	2009/11/27 1042	2009/11/27 1042
Parameter	Class	Units	Concentration[1,2]				
1,2-Dibromoethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2-Dichlorobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2-Dichloroethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,2-Dichloropropane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,3,5-Trimethylbenzene	VOC	µg/m^3	2.8118	3.0229	< 0.53032	0.63117	0.72025
1,3-Dichlorobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,3-Dichloropropane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
1,4-Dichlorobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
2,2-Dichloropropane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
2-Chlorotoluene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
4-Chlorotoluene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
4-Isopropyltoluene	VOC	µg/m^3	0.92021	0.8397	< 0.53032	< 0.52597	< 0.51447
Benzene	VOC	µg/m^3	5.1123	4.9263	8.4851	1.3149	1.2347
Bromobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Bromochloromethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Bromodichloromethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Bromoform	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Carbon tetrachloride	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447

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DOEHRS Sample ID			00001SQK	00001SQM	00001SR6	00001SRB	00001SRM
Field/Local Sample ID			AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09330_TO17	AFG_SHARAN_09331_TO17	AFG_SHARAN_09331_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Burn Pit
Start Date/Time			2009/12/12 1055	2009/12/12 1055	2009/11/26 1007	2009/11/27 1042	2009/11/27 1042
Parameter	Class	Units	Concentration[1,2]				
Chlorobenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Chloroform	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Cyclohexane	VOC	µg/m^3	0.61347	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Cyclopentane	VOC	µg/m^3	< 0.51123	< 0.55980	12.728	< 0.52597	5.2476
Decane	VOC	µg/m^3	33.23	33.028	1.0606	6.8377	6.1736
Dibromochloromethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Dibromomethane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Ethylbenzene	VOC	µg/m^3	1.9938	2.1832	1.697	0.99935	1.1318
Hexachlorobutadiene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Hexane	VOC	µg/m^3	0.76684	0.8397	1.5909	< 0.52597	0.87459
Isooctane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Isopropylbenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Methylcyclopentane	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Methylene chloride	VOC	µg/m^3	< 0.51123	< 0.55980	0.79547	< 0.52597	< 0.51447
Styrene	VOC	µg/m^3	1.0225	1.2875	2.9167	0.68377	1.5948
Tetrachloroethene (PCE)	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
Toluene	VOC	µg/m^3	3.9876	4.3665	2.8637	1.2097	1.6463
Trichloroethene (TCE)	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447

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DOEHRS Sample ID			00001SQK	00001SQM	00001SR6	00001SRB	00001SRM
Field/Local Sample ID			AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09330_TO17	AFG_SHARAN_09331_TO17	AFG_SHARAN_09331_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Burn Pit
Start Date/Time			2009/12/12 1055	2009/12/12 1055	2009/11/26 1007	2009/11/27 1042	2009/11/27 1042
Parameter	Class	Units	Concentration[1,2]				
cis-1,2-Dichloroethene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
cis-1,3-Dichloropropene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
m,p-Xylene	VOC	µg/m^3	6.1347	6.7176	0.58335	2.2091	2.2637
n-Butylbenzene	VOC	µg/m^3	1.5337	1.5674	< 0.53032	< 0.52597	< 0.51447
n-Propylbenzene	VOC	µg/m^3	1.7382	1.9033	< 0.53032	< 0.52597	0.51447
o-Xylene	VOC	µg/m^3	3.732	3.9746	< 0.53032	1.2097	1.2347
sec-Butylbenzene	VOC	µg/m^3	0.81797	0.8397	< 0.53032	< 0.52597	< 0.51447
tert-Butylbenzene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
trans-1,2-Dichloroethene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447
trans-1,3-Dichloropropene	VOC	µg/m^3	< 0.51123	< 0.55980	< 0.53032	< 0.52597	< 0.51447

[1]< X.XX = Below laboratory reporting limit (X.XX)
[2]Laboratory reporting limit is parameter and sample specific

LEGEND:
DOEHRS Sample ID = Defense Occupational and Environmental Health Readiness System Sample Identification Number
µg/m^3 = micrograms per cubic meter

APPENDIX E

DETAILED SAMPLE RESULTS
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009

DOEHRS Sample ID			00001SRS	00001SRY	00001SS2	00001SS6	00001SS9
Field/Local Sample ID			AFG_SHARAN_09332_TO17	AFG_SHARAN_09332_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Guard Tower
Start Date/Time			2009/11/28 1054	2009/11/28 1054	2009/11/30 0953	2009/11/30 0953	2009/11/30 0923
Parameter	Class	Units	Concentration[1,2]				
1,1,1,2-Tetrachloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1,1-Trichloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1,2,2-Tetrachloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1,2-Trichloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1-Dichloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1-Dichloroethene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,1-Dichloropropene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2,3-Trichlorobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2,3-Trichloropropane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2,4-Trichlorobenzene	SVOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2,4-Trimethylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	8.9088	9.7672	0.98149
1,2-Dibromo-3-chloropropane	VOC	µg/m^3	< 1.3614	< 1.3586	< 1.3920	< 1.3565	< 1.2914

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SRS	00001SRY	00001SS2	00001SS6	00001SS9
Field/Local Sample ID			AFG_SHARAN_09332_TO17	AFG_SHARAN_09332_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Guard Tower
Start Date/Time			2009/11/28 1054	2009/11/28 1054	2009/11/30 0953	2009/11/30 0953	2009/11/30 0923
Parameter	Class	Units	Concentration[1,2]				
1,2-Dibromoethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2-Dichlorobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,2-Dichloroethane	VOC	µg/m^3	< 0.54456	< 0.54343	0.94656	0.92245	< 0.51657
1,2-Dichloropropane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,3,5-Trimethylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	2.5056	2.6588	< 0.51657
1,3-Dichlorobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	0.5568	< 0.54262	< 0.51657
1,3-Dichloropropane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
1,4-Dichlorobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
2,2-Dichloropropane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
2-Chlorotoluene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
4-Chlorotoluene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
4-Isopropyltoluene	VOC	µg/m^3	< 0.54456	< 0.54343	0.77952	0.81393	< 0.51657
Benzene	VOC	µg/m^3	1.0347	1.1955	28.397	28.216	0.98149
Bromobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Bromochloromethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Bromodichloromethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Bromoform	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Carbon tetrachloride	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SRS	00001SRY	00001SS2	00001SS6	00001SS9
Field/Local Sample ID			AFG_SHARAN_09332_TO17	AFG_SHARAN_09332_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Guard Tower
Start Date/Time			2009/11/28 1054	2009/11/28 1054	2009/11/30 0953	2009/11/30 0953	2009/11/30 0923
Parameter	Class	Units	Concentration[1,2]				
Chlorobenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Chloroform	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Cyclohexane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Cyclopentane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	0.59688	0.87817
Decane	VOC	µg/m^3	0.87129	0.86949	37.862	40.154	2.3246
Dibromochloromethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Dibromomethane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Ethylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	11.136	10.31	0.77486
Hexachlorobutadiene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Hexane	VOC	µg/m^3	< 0.54456	0.65212	2.2829	2.0077	1.7047
Isooctane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Isopropylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Methylcyclopentane	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	0.98149
Methylene chloride	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Styrene	VOC	µg/m^3	1.0891	1.1412	33.965	30.929	2.2213
Tetrachloroethene (PCE)	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
Toluene	VOC	µg/m^3	0.81684	0.86949	14.477	13.565	1.9113
Trichloroethene (TCE)	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SRS	00001SRY	00001SS2	00001SS6	00001SS9
Field/Local Sample ID			AFG_SHARAN_09332_TO17	AFG_SHARAN_09332_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17	AFG_SHARAN_09334_TO17
Site			Burn Pit	Burn Pit	Burn Pit	Burn Pit	Guard Tower
Start Date/Time			2009/11/28 1054	2009/11/28 1054	2009/11/30 0953	2009/11/30 0953	2009/11/30 0923
Parameter	Class	Units	Concentration[1,2]				
cis-1,2-Dichloroethene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
cis-1,3-Dichloropropene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
m,p-Xylene	VOC	µg/m^3	< 0.54456	< 0.54343	5.4566	5.2634	1.0848
n-Butylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	1.6147	1.6821	< 0.51657
n-Propylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	2.1715	2.2247	< 0.51657
o-Xylene	VOC	µg/m^3	< 0.54456	< 0.54343	3.6749	3.527	0.56823
sec-Butylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	0.61248	0.65114	< 0.51657
tert-Butylbenzene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
trans-1,2-Dichloroethene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657
trans-1,3-Dichloropropene	VOC	µg/m^3	< 0.54456	< 0.54343	< 0.55680	< 0.54262	< 0.51657

[1]< X.XX = Below laboratory reporting limit (X.XX)
[2]Laboratory reporting limit is parameter and sample specific

LEGEND:
DOEHRS Sample ID = Defense Occupational and Environmental Health Readiness System Sample Identification Number
µg/m^3 = micrograms per cubic meter

APPENDIX F

DETAILED SAMPLE RESULTS
AMBIENT AIR VOLATILE ORGANIC COMPOUND SAMPLES
SHARANA, AFGHANISTAN
26 NOVEMBER-12 DECEMBER 2009

DOEHRS Sample ID			00001SSI	00001SSM	00001SWS	00001SWU	00001SWX	00001SX3
Field/Local Sample ID			AFG_SHARAN_09345_TO17	AFG_SHARAN_09345_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09354_TO17	AFG_SHARAN_09346_TO17
Site			Guard Tower	Guard Tower	Burn Pit	Burn Pit	Guard Tower	Burn Pit
Start Date/Time			2009/12/11 1019	2009/12/11 1019	2009/12/11 1051	2009/12/11 1051	2009/12/12 1005	2009/12/12 1035
Parameter	Class	Units	Concentration[1,2]					
1,1,1,2-Tetrachloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1,1-Trichloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1,2,2-Tetrachloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1,2-Trichloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1-Dichloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1-Dichloroethene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,1-Dichloropropene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2,3-Trichlorobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2,3-Trichloropropane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2,4-Trichlorobenzene	SVOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2,4-Trimethylbenzene	VOC	µg/m^3	1.285	< 0.55741	< 0.56838	< 0.61968	0.79058	1.0299

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SSI	00001SSM	00001SWS	00001SWU	00001SWX	00001SX3
Field/Local Sample ID			AFG_SHARAN_09345_TO17	AFG_SHARAN_09345_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09354_TO17	AFG_SHARAN_09346_TO17
Site			Guard Tower	Guard Tower	Burn Pit	Burn Pit	Guard Tower	Burn Pit
Start Date/Time			2009/12/11 1019	2009/12/11 1019	2009/12/11 1051	2009/12/11 1051	2009/12/12 1005	2009/12/12 1035
Parameter	Class	Units	Concentration[1,2]					
1,2-Dibromo-3-chloropropane	VOC	µg/m^3	< 1.4602	< 1.3935	< 1.4210	< 1.5492	< 1.4117	< 1.3551
1,2-Dibromoethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2-Dichlorobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2-Dichloroethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,2-Dichloropropane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,3,5-Trimethylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,3-Dichlorobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,3-Dichloropropane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
1,4-Dichlorobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
2,2-Dichloropropane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
2-Chlorotoluene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
4-Chlorotoluene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
4-Isopropyltoluene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Benzene	VOC	µg/m^3	3.5044	3.233	< 0.56838	< 0.61968	4.9693	1.5177
Bromobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Bromochloromethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Bromodichloromethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SSI	00001SSM	00001SWS	00001SWU	00001SWX	00001SX3
Field/Local Sample ID			AFG_SHARAN_09345_TO17	AFG_SHARAN_09345_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09354_TO17	AFG_SHARAN_09346_TO17
Site			Guard Tower	Guard Tower	Burn Pit	Burn Pit	Guard Tower	Burn Pit
Start Date/Time			2009/12/11 1019	2009/12/11 1019	2009/12/11 1051	2009/12/11 1051	2009/12/12 1005	2009/12/12 1035
Parameter	Class	Units	Concentration[1,2]					
Bromoform	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Carbon tetrachloride	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Chlorobenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Chloroform	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Cyclohexane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Cyclopentane	VOC	µg/m^3	24.765	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Decane	VOC	µg/m^3	1.9274	2.2854	< 0.56838	< 0.61968	1.6941	2.8728
Dibromochloromethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Dibromomethane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Ethylbenzene	VOC	µg/m^3	1.1097	1.0591	< 0.56838	< 0.61968	1.6941	< 0.54203
Hexachlorobutadiene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Hexane	VOC	µg/m^3	1.1097	< 0.55741	< 0.56838	< 0.61968	0.84704	< 0.54203
Isooctane	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Isopropylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Methylcyclopentane	VOC	µg/m^3	0.8177	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Methylene chloride	VOC	µg/m^3	1.1097	4.4036	< 0.56838	< 0.61968	< 0.56470	0.59624
Styrene	VOC	µg/m^3	2.7451	2.2297	< 0.56838	< 0.61968	2.9929	< 0.54203

Deployment OEH Risk Characterization, Ambient Air VOC Samples, Sharana, Afghanistan, 26 Nov-12 Dec 09, U_AFG_SHARANA_CM_A17_20091212

DOEHRS Sample ID			00001SSI	00001SSM	00001SWS	00001SWU	00001SWX	00001SX3
Field/Local Sample ID			AFG_SHARAN_09345_TO17	AFG_SHARAN_09345_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09346_TO17	AFG_SHARAN_09354_TO17	AFG_SHARAN_09346_TO17
Site			Guard Tower	Guard Tower	Burn Pit	Burn Pit	Guard Tower	Burn Pit
Start Date/Time			2009/12/11 1019	2009/12/11 1019	2009/12/11 1051	2009/12/11 1051	2009/12/12 1005	2009/12/12 1035
Parameter	Class	Units	Concentration[1,2]					
Tetrachloroethene (PCE)	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
Toluene	VOC	µg/m^3	2.0442	1.5608	< 0.56838	< 0.61968	3.0494	1.1925
Trichloroethene (TCE)	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
cis-1,2-Dichloroethene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
cis-1,3-Dichloropropene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
m,p-Xylene	VOC	µg/m^3	0.75929	0.61315	< 0.56838	< 0.61968	1.0729	0.92145
n-Butylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
n-Propylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
o-Xylene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
sec-Butylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
tert-Butylbenzene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
trans-1,2-Dichloroethene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203
trans-1,3-Dichloropropene	VOC	µg/m^3	< 0.58407	< 0.55741	< 0.56838	< 0.61968	< 0.56470	< 0.54203

[1]< X.XX = Below laboratory reporting limit (X.XX)
[2]Laboratory reporting limit is parameter and sample specific

LEGEND:
DOEHRS Sample ID = Defense Occupational and Environmental Health Readiness System Sample Identification Number
µg/m^3 = micrograms per cubic meter