DEPARTMENT OF THE ARMY
PUBLIC HEALTH COMMAND REGION–EUROPE
CMR 402
APO AE 09180

MCHB-PHC 22 October 2018

MEMORANDUM FOR Directorate of Public Works, U.S. Army Garrison (USAG) Bavaria (IMBV-PW), Unit 28130, APO AE 09114

SUBJECT: USAG Bavaria, Grafenwoehr-Vilseck, Annual Drinking Water Monitoring, Fiscal Year 2018

1. USAG Bavaria, Grafenwoehr-Vilseck, complied with the Environmental Final Governing Standards – Germany water quality criteria for the drinking water parameters evaluated during the fiscal year 2018 (FY18) monitoring events.

2. A copy of the report is enclosed. We are interested in your comments and suggestions for improving the usefulness of the information and recommendations provided in this report. If you have any comments, or if this report does not meet your needs or expectations, please contact the undersigned at DSN 314-590-9912 or CIV 06371-9464-9912.

FOR THE COMMANDER:

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USAG Bavaria, Grafenwoehr-Vilseck, Annual Drinking Water Monitoring, Fiscal Year 2018

Prepared by Mr. Wayne Jousma

Annual Drinking Water Monitoring
USAG Bavaria, Grafenwoehr-Vilseck,
Fiscal Year 2018

1 Purpose and Background

1.1 General

The Environmental Final Governing Standards – Germany (GFGS) (DoD, 2016) require that drinking water be periodically analyzed for selected chemical, physical, and radiological water quality parameters. At the request of Installation Management Command – Europe (IMCOM-E), Public Health Command Europe (PHCE) collects drinking water samples at U.S. Army Garrison (USAG) Bavaria, Grafenwoehr-Vilseck, in support of these requirements.

PHCE personnel conducted annual drinking water sampling on 6-7 June 2018. Contained herein are the findings and recommended courses of action.

1.2 Water Systems

The following water systems were monitored: Grafenwoehr community water system (CWS); Eschenbach non-transient non-community water system (NTNCWS); Auerbach transient non-community water system (TNCWS); Kirchenthumbach TNCWS; Koenigstein TNCWS; and Vilseck CWS. Appendix A provides a tabulated summary of each water system.

2 Findings and Discussion

Significant findings are summarized and discussed below. Analytical results from the FY18 annual monitoring event are in Appendix B. Certificates of analysis for all analytes monitored were provided in electronic format to the Directorate of Public Works (DPW) separately from this report.

2.2 Nitrate/Nitrite

The FGS requires annual monitoring of all groundwater based systems. The nitrate concentration measured at Koenigstein TNCWS was 5.4 milligrams per liter (mg/L) as N(1), greater than the increased monitoring threshold of 5 mg/L nitrate as N, but was below the maximum contaminant level (MCL) of 10 mg/L nitrate as N. Nevertheless, the U.S. Army Regional Health Command Europe (RHCE) letter, dated 19 November 2014, provided approval for a reduced annual nitrate monitoring frequency at Koenigstein TNCWS based on the determination that historical nitrate levels are reliable and consistent. All other water systems tested were below 5 mg/L. Nitrate/Nitrite monitoring will be conducted again in FY19. A table of historic results is in table 1 below.

Table 1. Historic Values Nitrate at Range 211

Grafenwoehr Historical Lookback Koenigstein TNCWS Range 211 Nitrate	
Date Sample Drawn	Nitrate as N results (mg/L)
23-Apr-13	6.2
12-Jun-13	6.2
19-Dec-13	6
8-Jan-14	5.7
26-Feb-14	6.4
23-Apr-14	6.4
26-Jun-14	5.5
16-Jul-14	5.3
19-Aug-14	5.4
22-Apr-15	5.3
27-Apr-16	5.4
19-Apr-17	5.7
16-Jun-18	5.4

3 Conclusions and Recommendations

3.1 Annual Monitoring Compliance Status

USAG Bavaria, Grafenwoehr and Vilseck communities complied with GFGS water quality criteria for the drinking water parameters evaluated during the annual monitoring event. Continue required routine drinking water monitoring in accordance with GFGS and Table 2.

Continue to monitor for nitrate at Koenigstein TNCWS annually as increased monitoring is not necessary. The historical nitrate levels for this TNCWS have been deemed reliable and consistent, in accordance with GFGS, and as approved by RHCE monitoring should continue on a reduced annual frequency.

3.2 Recommendations

Inform the public of this study and its findings, conclusions, and recommendations.

Request drinking water suppliers periodically provide reports of all sampling and testing conducted to USAG Bavaria, Grafenwoehr-Vilseck, DPW.

Notify IMCOM-E and PHCE when significant changes occur to USAG Bavaria, Grafenwoehr-Vilseck, drinking water systems, such as chlorination/disinfection status and changes in water sources, occupancy or mission.

3.3 Bacteriological and Operational Monitoring

PHCE does not conduct monitoring of bacteriological or operational parameters for the garrisons. Ensure appropriate monitoring of garrison water systems is being conducted in order to comply with GFGS drinking water requirements.

Table 2. USAG Bavaria, Grafenwoehr-Vilseck, Public Water System Compliance Status Summary

Water System	Monitoring Sample Parameters								
	Inorganics	Ammonia/ Nitrate/Nitrite	PAHs	VOCs	Other Organics (SVOCs)	Pesticides & PCBs	TTHM & HAA5	Radionuclides	Asbestos
Grafenwoehr Community Water System (CWS)									
Main Camp	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY21	Sampled:FY18 Due: FY21	Sampled: FY17 Due: FY20	Sampled: FY16 Due: FY19	Sampled: FY18 Due: FY22	Sampled: FY15 Due: FY24
Eschenbach NTNCWS									
Netzaberg Village Center	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY21	Sampled:FY18 Due: FY21	Sampled: FY17 Due: FY20	Sampled: FY16 Due: FY19		Sampled: FY15 Due: FY24
Auerbach TNCWS									
Range 213	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19							Sampled: FY15 Due: FY24
Kirchenbthumbach TNCWS									
Range 301	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19							Sampled: FY15 Due: FY24
Koenigstein TNCWS									
Range 211	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19							Sampled: FY15 Due: FY24
Vilseck CWS									
South Camp	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY21	Sampled:FY18 Due: FY21	Sampled: FY17 Due: FY20	Sampled: FY16 Due: FY19	Sampled: FY18 Due: FY22	Sampled: FY15 Due: FY24
Fitzthum Village	Sampled: FY18 Due: FY21	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY19	Sampled: FY18 Due: FY21	Sampled:FY18 Due: FY21	Sampled: FY17 Due: FY20	Sampled: FY16 Due: FY19	Sampled: FY18 Due: FY22	Sampled: FY15 Due: FY24

Key

	Monitoring Not Required
	Compliant, All Standards Satisfied
	Compliant, but Increased Monitoring Required
	Requires Additional Monitoring in FY19 and/or Investigation
	Not Compliant, Action Required

PAHs: Polycyclic Aromatic Hydrocarbons
VOCs: Volatile Organic Compounds
PCBs: Polychlorinated Biphenyls
TCE: Trichloroethylene
TTHM: Total Trihalomethanes
HAA5: Haloacetic Acids (Five)

4 Point of Contact

Direct questions concerning this report to Mr. Wayne Jousma at DSN: 314-590-9780, commercial: 06371-9464-9780, or e-mail: wayne.r.jousma.civ@mail.mil. Direct requests for additional services to MAJ Gregory L. Schaefer at DSN: 314-590-9838, commercial: 06371-9464-9831, or e-mail: gregory.l.schaefer.mil@mail.mil.

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Appendix A

Water Systems

Table A-1. USAG Bavaria, Grafenwoehr-Vilseck, Water Systems Summary

Water System	Supplier	Water Source	Area Supplied	Treatment by Water Supplier	On-site Treatment	Population Served
Grafenwoehr CWS	Stadtwerke Grafenwoehr	Ground	Main Camp; Field Camps (Aachen, Algiers, Kasserine, Airfield, Normandy)	Aeration and filtration to remove iron & manganese	Chlorine gas; Fluoridation (sodium fluoride); Corrosion control (silicon dioxide) Bldg 546	8300
			Brigade Combat Team (BCT) Area		Chlorine gas; Fluoridation (sodium fluoride); (BCT treatment and distribution system owned and operated by Stadwerke Grafenwoehr)	
Eschenbach NTNCWS	Stadtwerke Eschenbach	Ground	Netzaberg Village Center (Schools, Commissary, Shoppette, CDC)	Aeration and filtration	Chlorine gas: Fluoridation (sodium fluoride) Unmarked Bldg	< 500
			Range 101		Chlorination (sodium hypochlorite)	Variable ≥ 25
			Range 102		Chlorination (sodium hypochlorite)	
Auerbach TNCWS	AquaOpta GmbH	Ground	Range 213; TAC Site 17	Aeration and filtration	Chlorination (sodium hypochlorite) Bldg 21318	Variable ≥ 25
Kirchenthumbach TNCWS	Stadtwerke Kirchenthumbach	Ground	Range 301 / 305 / 307	Aeration and filtration	Chlorination (sodium hypochlorite) Bldg 301115	Variable ≥ 25
Koenigstein TNCWS	Stadtwerke Koenigstein	Ground	Range 211; German Golf Course	Aeration and filtration	Chlorination (sodium hypochlorite) Bldg 21114	Variable ≥ 25
Vilseck CWS	Stadtwerke Schoeffelhoff	Ground	South Camp	Aeration and filtration	Chlorine gas; Fluoridation (sodium fluoride) Bldg 561	7300
			Range 204		Chlorination boost (sodium hypochlorite)	
			Fitzthum Village		Chlorination (chlorine dioxide) Fluoridation (fluorosilicic acid) Bldg 840	< 500

CWS – Community Water System
TNCWS – Transient Non-Community Water System
FHA – Family Housing Area
GW – Groundwater Supply
GWUDISW – Groundwater Under Direct Influence of Surface Water
NTNCWS – Non-Transient Non-Community Water System

Appendix B

Procedures, Methods, and Analytical Results

Drinking water samples were collected by Public Health Command Europe (PHCE) personnel using accepted standards associated with the analytical methods utilized, and analyzed by PHCE, Laboratory Sciences (LS), or contract laboratories as necessary. PHCE, LS, is accredited by the internationally recognized *Deutsches Akkreditierungssystem Prüfwesen* GmbH (DAP) to DIN EN ISO/IEC 17025:2005. Contract laboratories are, at a minimum, accredited to ISO 17025. Analytical methods utilized for each analyte are noted on the laboratory certificates of analysis provided to the Directorate of Public Works (DPW). Additional information is available upon request.

The table(s) below may contain the following acronyms and identifiers:
B – Building
BOLD – Indicates result is above recommended level
BOLD/Shaded – Indicates results are above the MCL
CWS – Community Water System
DBP – Disinfectant Byproducts
HAA5 – Haloacetic Acids (HAA5)
MCL – Maximum Contaminant Level
MDL – Laboratory Method Detection Limit
MFL – Million Fibers per Liter
mg/L – Milligrams per Liter
n/a – Not Applicable
No Std – No Final Governing Standard
Not Required – GFGS does not require monitoring during the FY17 Monitoring Cycle
NTNCWS – Non-Transient Non-Community Water System
PAHs – Polycyclic Aromatic Hydrocarbons
TNCWS – Transient Non-Community Water System
TTHM – Total Trihalomethanes
VOCs – Volatile Organic Compounds

Certificates of analysis for all analytes monitored were provided in electronic format to the Directorate of Public Works (DPW) separately from this report. Results are tracked and stored under the following PHCE laboratory report numbers:

Table B-1 USAG Bavaria, Grafenwoehr-Vilseck, PHCE Laboratory Reports

Project Name	Date Turned Into Lab	Date Received From Lab	SRN Number	Laboratory Report Number
S.0053050.2.3 Graf	7-Jun-18	17-Jul-18	18-0231	E18-00491
S.0053050.2.3 Graf	7-Jun-18	23-Jul-18	18-0231	E18-00498

Table B-2. USAG Bavaria, Grafenwoehr-Vilseck, Inorganics; Metals and Non-Metals

WATER SYSTEM	Public Health Command Europe			Grafenwoehr CWS	Eschenbach NTNCWS	Auerbach TNCWS	Kirchen-thumbach TNCWS	Koenigstein TNCWS	Vilseck CWS	Vilseck CWS
SAMPLE SITE				Main Camp	Netzaberg Village Center	Range 213	Range 301	Range 211	South Camp	Fitzthum Village
LOCATION				B546	Chlor Station	B21318	B30115	B21114	B561	B840
COLLECTION DATE				6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	7-Jun-18	7-Jun-18
Inorganics	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Cyanide, free	mg/L	0.2	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride	mg/L	4	0.1	0.56	0.7	<0.1	<0.1	<0.1	0.8	0.5
Nitrate (as N)	mg/L	10	0.1	0.3	<0.1	3.3	2.2	**5.4**	1	0.6
Nitrite (as N)	mg/L	1	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Total Nitrate/Nitrite	mg/L	10	-	0.3	<0.1	3.3	2.3	5.4	1	0.6
Metals	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Antimony	mg/L	0.006	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic	mg/L	0.01	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium	mg/L	2	0.005	0.033	0.041	0.021	0.018	0.021	0.03	0.023
Beryllium	mg/L	0.004	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron	mg/L	NoStd*	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	0.005	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Chromium	mg/L	0.1	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Mercury	mg/L	0.002	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Nickel	mg/L	0.1	0.001	0.0017	<0.0010	0.001	0.0012	0.0013	<0.0010	<0.0010
Selenium	mg/L	0.05	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Sodium	mg/L	NoStd*	0.5	3.6	1.8	6.3	1.9	8.1	2.3	0.9
Thallium	mg/L	0.002	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

*The FGS establishes notification levels for these parameters. Parameters were below the respective notification levels.

Table B-3. USAG Bavaria, Grafenwoehr-Vilseck, Polycyclic Aromated Hydrocarbons

WATER SYSTEM	Public Health Command Europe			Grafenwoehr CWS	Eschenbach NTNCWS	Auerbach TNCWS	Kirchen-thumbach TNCWS	Koenigstein TNCWS	Vilseck CWS	Vilseck CWS
SAMPLE SITE				Main Camp	Netzaberg Village Center	Range 213	Range 301	Range 211	South Camp	Fitzthum Village
LOCATION				B546	Chlor Station	B21318	B30115	B21114	B561	B840
COLLECTION DATE				6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	7-Jun-18	7-Jun-18
PAHs - Regulated	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Benzo(a)pyrene	mg/L	0.0002	0.000003	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003
Total PAHs	mg/L	0.0001	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002
Benzo(k)fluoranthene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002
Benzo(g,h,i)perylene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002
Indeno(1,2,3-cd)pyrene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002
PAHs - Not Regulated	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Benz(a)anthracene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002
Chrysene	mg/L	No Std	0.00002	<0.00002	<0.00002	-	-	-	<0.00002	<0.00002

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Table B-4. USAG Bavaria, Grafenwoehr-Vilseck, Volatile Organic Chemicals Blanks

COLLECTION DATES: 6-7 June 2018			Blank DLS Identification Numbers			
			E18-00491-031	E18-00491-033	E18-00491-035	E18-00491-037
Volatile Organic Chemical	UNITS	MCL	Results			
Benzene	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-Trichloroethane	mg/L	0.2	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichloroethane	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethene	mg/L	0.007	<0.0005	<0.0005	<0.0005	<0.0005
1,2,4-Trichlorobenzene	mg/L	0.07	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichlorobenzene	mg/L	0.6	<0.0005	<0.0005	<0.0005	<0.0005
1-2-Dichloroethane	mg/L	No Std	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloropropane	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Bromodichloromethane	mg/L	No Std	-	-	-	-
Bromoform	mg/L	No Std	<0.0005	<0.0005	<0.0005	<0.0005
Carbon tetrachloride	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	mg/L	0.1	<0.0005	<0.0005	<0.0005	<0.0005
Chloroform*	mg/L	No Std	-	-	-	-
cis-1,2-Dichloroethene	mg/L	0.07	<0.0005	<0.0005	<0.0005	<0.0005
Di (2-ethylhexyl) adipate	mg/L	0.002	-	-	-	-
Di (2-ethylhexyl) phthalate	mg/L	0.006	-	-	-	-
Dibromochloromethane	mg/L	No Std	-	-	-	-
Ethylbenzene	mg/L	0.7	<0.0005	<0.0005	<0.0005	<0.0005
Methyl t-butyl ether (MtBE)	mg/L	No Std	-	-	-	-
Methylene chloride	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Naphthalene	mg/L	No Std	-	-	-	-
Styrene	mg/L	0.1	<0.0005	<0.0005	<0.0005	<0.0005
Tetrachloroethene (PCE)	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	mg/L	1	<0.0005	<0.0005	<0.0005	<0.0005
trans-1,2-Dichloroethene	mg/L	0.1	<0.0005	<0.0005	<0.0005	<0.0005
Trichloroethene (TCE)	mg/L	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Trihalomethanes, total	mg/L	0.08	-	-	-	-
Vinyl Chloride	mg/L	0.002	<0.0005	<0.0005	<0.0005	<0.0005
Xylene, Total	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005

Table B-5. USAG Bavaria, Grafenwoehr-Vilseck, Volatile Organic Chemicals Results

WATER SYSTEM	Public Health Command Europe			Grafenwoehr CWS	Eschenbach NTNCWS	Auerbach TNCWS	Kirchen-thumbach TNCWS	Koenigstein TNCWS	Vilseck CWS	Vilseck CWS
SAMPLE SITE				Main Camp	Netzaberg Village Center	Range 213	Range 301	Range 211	South Camp	Fitzthum Village
LOCATION				B546	Chlor Station	B21318	B30115	B21114	B561	B840
COLLECTION DATE				6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	7-Jun-18	7-Jun-18
Volatile Organic Chemicals	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Benzene	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-1-1-Trichloroethane	mg/L	0.2	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-1-2-Trichloroethane	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-1-Dichloroethene	mg/L	0.007	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-2-4-Trichlorobenzene	mg/L	0.07	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-2-dichlorobenzene	mg/L	0.6	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-2-Dichloroethane	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-2-Dichloropropane	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-4-Dichlorobenzene	mg/L	No Std	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Carbon tetrachloride	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	mg/L	No Std	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
cis-1-2-Dichloroethene	mg/L	0.07	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Di(2-ethylhexyl) adipate*	mg/L	0.4	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Di(2-ethylhexyl) phthalate*	mg/L	0.006	0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Ethylbenzene	mg/L	0.7	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Methylene chloride	mg/L	No Std	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Styrene	mg/L	0.1	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tetrachloroethene {PCE}	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	mg/L	1	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
trans-1-2-Dichloroethene	mg/L	0.1	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Trichloroethene {TCE}	mg/L	0.005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vinyl Chloride	mg/L	0.002	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Xylenes- total	mg/L	10	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

*Synthetic Volatile Organic Compounds (SVOCs).

Table B-6. Radiological Monitoring Results FY18

WATER SYSTEM	Public Health Command Europe			Grafenwoehr CWS	Eschenbach NTNCWS	Auerbach TNCWS	Kirchen-thumbach TNCWS	Koenigstein TNCWS	Vilseck CWS	Vilseck CWS
SAMPLE SITE				Main Camp	Netzaberg Village Center	Range 213	Range 301	Range 211	South Camp	Fitzthum Village
LOCATION				B546	Chlor Station	B21318	B30115	B21114	B561	B840
COLLECTION DATE				6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	6-Jun-18	7-Jun-18	7-Jun-18
Radiological Activity	**UNITS**	**MCL**	**MDL**	**RESULTS**						
Gross Alpha Activity, total	pCi/L	No Std	0	1.2	-0.057	-	-	-	0.39	0.91
Gross Alpha Uncertainty	pCi/L	n/a	0	0.99	0.7	-	-	-	0.56	0.66
Gross Alpha Minimum Detect Activity	pCi/L	n/a	0	1.1	1.2	-	-	-	0.72	0.68
Gross Alpha Activity (Calculated)	pCi/L	15	0	1.20	0.00	-	-	-	0.39	0.91
Gross Beta Activity, total	pCi/L	50	0	4.2	3	-	-	-	1.2	0.79
Gross Beta Uncertainty	pCi/L	n/a	0	0.97	0.96	-	-	-	0.7	0.69
Gross Beta Minimum Detect Activity	pCi/L	n/a	0	1	1.2	-	-	-	1	1
Uranium	mg/L	0.03	0	<0.0019	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Radium - 228 Activity	pCi/L	No Std	0	1	5.1	-	-	-	0.77	0.23
Radium - 228 Uncertainty	pCi/L	n/a	0	0.38	0.39	-	-	-	0.36	0.36
Radium – 228 Minimum Detect Activity	pCi/L	n/a	0	0.46	0.56	-	-	-	0.47	0.57
Radium – 226 Activity	pCi/L	No Std	0	0.46	0.3	-	-	-	1.2	0.47
Radium – 226 Uncertainty	pCi/L	n/a	0	0.049	0.049	-	-	-	0.073	0.05
Radium – 226 Minimum Detect Activity	pCi/L	n/a	0	0.034	0.059	-	-	-	0.15	0.03
Combined Radium 226/228	pCi/L	5	0	1.46	5.4	-	-	-	1.97	0.7