

DEPARTMENT OF THE ARMY US ARMY INSTALLATION MANAGEMENT COMMAND IMCOM - READINESS HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT McCOY 2171 SOUTH 8th AVENUE FORT McCOY, WI 54656-5150

December 22, 2016

Ms. Colleen Olsberg USEPA REGION 5 77 West Jackson Boulevard Mail Code: LU-9j Chicago, IL 60604-3507

Dear Ms. Olsberg:

Recent studies have identified serious health concerns associated with exposure to certain perfluorinated chemicals (PFCs) which were contained in Aqueous Film Forming Foam (AFFF) used to extinguish fires caused by flammable liquids. AFFF was historically utilized at Fort McCoy's former Fire Training Burn Pit 2 (FTBP2; BRRTS Case No. 02-42-279956; included in Fort McCoy's Resource Conservation and Recovery Act permit W13 210 020 563), and is currently being used at Fire Training Burn Pit 3 (FTBP3) located southeast (upgradient) of FTBP2 (Figure 1).

On September 6, 2016, the installation collected samples from the four (4) monitoring wells located at FTBP3, and on October 13, 2016, collected groundwater samples from 11 Geoprobe® borings in the vicinity of former FTBP2 (Figure 1). All of the samples were analyzed for PFCs. Communication with the Wisconsin Department of Natural Resources (WDNR) revealed that eight PFCs are typically found in groundwater at former fire training sites where AFFF has been utilized. All of the samples were analyzed for these eight constituents, which are perfluorobutanoic acid (PFBA), perfluoropentanoic acid (PFPeA), perfluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), perfluorooctanoic acid (PFOA), perfluorobutanesulfonate (PFBS), perfluorohexanesulfonate (PFHxS), and perfluorooctanesulfonate (PFOS). Analytical results are included in Attachment 1, logs and borehole abandonment forms for the Geoprobe® borings are included in Attachment 2.

PFC constituents readily dissolve and tend to migrate freely in groundwater without adhering to soil particles. Two PFCs that have been found to cause serious health problems are PFOS and PFOA. In 2016 the United States Environmental Protection Agency (USEPA) established a Health Advisory (HA) level in drinking water for combined concentrations of PFOS and PFOA of 70 parts per trillion. Federal Maximum Contaminant Levels (MCLs) and State of Wisconsin Enforcement Standards (ESs) have not yet been established for these parameters.

Groundwater elevations collected from the former monitoring wells at FTBP2 in 1994 and 2002 indicate that groundwater flow is north-northwest, toward Silver Creek (Attachment 3), at a rate of 248 feet per year. The creek is more than 3,200 feet north of FTBP2 (Figure 1). AFFF use at FTBP2 began prior to 1982. The last time AFFF was used at FTBP2 was in 1992. Groundwater has had time to flow nearly 6,000 feet downgradient from the pit since the last time AFFF was used at FTBP2 (Assume 1992: 24 years X 365 days/year X 0.68 feet/day = 5,956.8 feet). AFFF continues to be used at FTBP3. In addition, groundwater has had time to flow more than 8,400 feet since 1982, and AFFF use began prior to that time.

The September 2016 results for FTBP3 and the October 2016 results for FTBP2 are summarized in Table 1. Figure 2 presents an isoconcentration map for combined PFOS and PFOA concentrations reported at both FTBP2 and FTBP3.

As shown, it appears that residual PFC contamination at FTBP2 is low. This would be expected, as remediation at FTBP2 included removal of 12,700 gallons of liquid and 610 cubic yards of contaminated soil, along with the liner. Elevated PFC concentrations are flowing north and northwest from ongoing AFFF use at FTBP3. Fort McCoy reported the PFC contamination at FTBP3 to the WDNR on October 11, 2016. Fort McCoy and the WDNR will begin addressing this contamination in the coming months.

Since 1995 (approximate time when AFFF use at FTBP3 began), PFC concentrations in excess of the HA have only migrated 1330 feet beyond FTBP3. The data show that even though PFCs have been migrating in groundwater away from FTBP2 and FTBP3 for 24 and 22 years respectively, combined concentrations of PFOS and PFOA at levels exceeding the HA do not extend beyond the north/south runway and only extend approximately 740 feet north of FTBP2. This is approximately 2,400 feet (south) upgradient of Silver Creek (Figures 1 and 2). In addition, data from the three potable wells located at the airfield (Figure 1) show that PFCs are were not detected (Attachment 4). Since it has been over 34 years since AFFF use began at the Airfield, it is likely that the downgradient plume margin has reached its maximum extent, and is stable to receding. These data show that there are no completed human health or ecological exposure pathways. Such pathways are not likely to be completed in the future. Therefore, Fort McCoy does not recommend any further action with regard to FTBP2.

If you have any questions, please contact Craig Bartholomew at (608) 388-8453.

Sincerely,

James R Hessi

James R. Hessil Chief, Environmental Division Directorate of Public Works

Enclosures

CC: Ms. Mae Willkom - WDNR





TABLE 1 PFC SAMPLING RESULTS FOR FIRE TRAINING BURN PITS 2 & 3 (ug/L)

SAMPLING POINT				PARA	METER				COMBINED
	PFBA	PFHxA	PFHpA	PFBS	PFPeA	PFHxS	PFOA	PFOS	PFOA & PFOS
FIRE TRAINING BUR	RN PIT 2 (1	0/13 & 14/20	016)						
B-1	0.0062	0.018	0.0083	0.0037	0.014	0.088	0.0055	0.024	0.0295
B-2	0.0065	0.010	0.0066	0.0041	0.010	0.036	0.014	0.081	0.095
B-3	0.100	0.480	0.130	0.230	0.210	4.400	0.300	62.000	62.300
B-4	0.0076	0.012	0.012	0.0025	0.0093	0.070	0.017	0.810	0.827
B-4 (DUP)	0.0074	0.012	0.012	0.0026	0.0092	0.070	0.017	0.820	0.017
B-5	0.330	0.880	1.400	0.120	0.730	7.400	3.400	69.000	72.400
B-6	0.0028	< 0.00077	0.00082	< 0.00090	0.0018	0.0018	0.0024	0.0037	0.0061
B-7	0.0017	0.0015	0.0018	0.0015	0.0012	0.044	0.0051	0.140	0.1451
B-8	0.00058	< 0.00082	< 0.00083	0.001	0.0019	< 0.00090	< 0.00078	0.0019	0.0019
B-9	0.0064	0.0044	0.0040	< 0.00089	0.0029	0.0037	0.0046	0.032	0.0366
B-10	0.00046	< 0.00078	< 0.00079	< 0.00091	< 0.00098	0.0010	0.0014	0.0034	0.0048
B-11	0.0058	0.0036	0.0016	0.0010	0.0040	0.0036	0.0036	0.029	0.0326
FIRE TRAINING BUR	N PIT 3 (9)	/6/2016)							
MW-1R	0.094	0.250	0.280	0.035	0.390	1.200	0.480	6.800	7.280
MW-1R (DUP)	0.098	0.260	0.300	0.042	0.420	1.300	0.480	6.300	6.780
MW-2R	1.400	4.900	1.200	0.380	5.300	7.800	0.720	67.000	67.720
MW-3R	0.750	2.000	0.530	1.200	3.000	2.600	0.510	2.100	2.610
MW-4R	0.200	1.200	0.230	0.250	0.700	5.500	0.650	120.000	120.650
USEPA PROVISIONAL HEALTH ADVISORY (ug/L)	NS	NS	NS	NS	NS	NS	0.07 ¹	0.07 ¹	0.07 ¹

¹This standard is for combined PFOA and PFOS.

ATTACHMENT 1 ANALYTICAL REPORTS

September 2016 Laboratory Reports

FTBP3



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento 880 Riverside Parkway West Sacramento, CA 95605 Tel: (916)373-5600

TestAmerica Job ID: 320-21576-2 Client Project/Site: Fort McCoy PFAS FTBP3

For:

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Hyde Environmental, Inc. W175 N11163 Stonewood Drive Suite 110 Germantown, Wisconsin 53022

Attn: Jim Lindemann

sanda pedich

Authorized for release by: 10/3/2016 2:53:28 PM Sandie Fredrick, Project Manager II (920)261-1660

sandie.fredrick@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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3

Qualifiers

LCMS

LCIVIS		
Qualifier	Qualifier Description	
В	Compound was found in the blank and sample.	5
*	Isotope Dilution analyte is outside acceptance limits.	5
E	Result exceeded calibration range.	

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CNF	Contains no Free Liquid	
DER	Duplicate error ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision level concentration	
MDA	Minimum detectable activity	
EDL	Estimated Detection Limit	
MDC	Minimum detectable concentration	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative error ratio	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	

TEQ Toxicity Equivalent Quotient (Dioxin)

1 2 3 4 5 6 7 8 9 10 11 12

Job ID: 320-21576-2

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-21576-2

Comments

No additional comments.

Receipt

The samples were received on 9/8/2016 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.0° C and 5.1° C.

Dioxin

Method(s) 537 (Modified): The concentration of Perfluorooctanesulfonic acid (PFOS) in the following sample exceeded the instrument calibration range: MW-2R (320-21576-16) and MW-4R (320-21576-17). This analytes has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range. The maximum dilution was performed for the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS

Method(s) 537 (Modified): The first level standard from the initial calibration curve is used to evaluate the tune criteria. The instrument mass windows are set at +/- 0.5amu; therefore, detection of the analyte serves as verification that the assigned mass is within +/- 0.5amu of the true value, which meets the DoD/DOE QSM tune criterion.

Method(s) 537 (Modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for several analytes in the following samples: MW-1R (DUP) (320-21576-15), MW-4R (320-21576-17) and MW-3R (320-21576-18). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (Modified): The injection times displayed in chrom/TALS do not match the injection times listed on A8 instrument printouts. The instrument printout listing the injection times can be found at the end of the run log section. MW-1R (320-21576-14), MW-1R (DUP) (320-21576-15), MW-2R (320-21576-16), MW-4R (320-21576-17), MW-3R (320-21576-18), (CCV 320-129688/19), (CCV 320-129688/20), (CCV 320-129688/6), (CCV 320-129688/7), (CCV 320-129688/4), (CCV 320-129688/5), (ICV 320-129364/12), (ICV 320-129364/22), (CCV 320-129481/30), (CCV 320-129481/31), (CCV 320-129481/59), (CCV 320-129481/60), (CCV 320-129481/63), (CCV 320-129481/64), (CCV 320-129481/70), (CCV 320-129481/15), (CCV 320-129481/5), (LCS 320-126548/2-A), (MB 320-126548/1-A), (320-21576-A-5-A), (320-21576-B-5-A MS), (320-21576-B-5-B MSD), (CCV 320-129691/16), (CCV 320-129691/17), (CCV 320-129691/26) and (CCV 320-129691/27)

Method(s) 537 (Modified): The closing continuing calibration verification (CCV) standard associated with batch 320-129481 failed to meet acceptance limits for Perfluorooctanesulfonic acid (PFOS). The CCV was out high due to carryover from high concentrations of PFOS in the preceding samples. The opening CCV was in control and so reanalysis of the following samples was not performed: (CCV 320-129481/63).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample ID: MW-1R

Lab Sample ID: 320-21576-14

Lab Sample ID: 320-21576-15

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Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	94	B	2.1	0.38	ng/L	1	_	537 (Modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	250		2.1	0.65	ng/L	1		537 (Modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	280		2.1	0.66	ng/L	1		537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA)	480		2.1	0.62	ng/L	1		537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	35		2.1	0.76	ng/L	1		537 (Modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	390		100	41	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	1200		100	36	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	6800		160	53	ng/L	50		537 (Modified)	Total/NA

Client Sample ID: MW-1R (DUP)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	98	B	2.1	0.38	ng/L	1		537 (Modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	260		2.1	0.65	ng/L	1		537 (Modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	300		2.1	0.66	ng/L	1		537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA)	480		2.1	0.62	ng/L	1		537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	42		2.1	0.76	ng/L	1		537 (Modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	420		100	41	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	1300		100	36	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	6300		170	53	ng/L	50		537 (Modified)	Total/NA

Client Sample ID: MW-2R

Lab Sample ID: 320-21576-16

Lab Sample ID: 320-21576-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - DL	1400	B	110	19	ng/L	50	_	537 (Modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	4900		110	33	ng/L	50		537 (Modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	1200		110	34	ng/L	50		537 (Modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	5300		110	42	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	720		110	31	ng/L	50		537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	380		110	39	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	7800		110	37	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	67000	E	340	110	ng/L	100		537 (Modified)	Total/NA

Client Sample ID: MW-4R

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	200	<u>в</u> –	2.1	0.38	ng/L	1	_	537 (Modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	230		2.1	0.67	ng/L	1		537 (Modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	1200		100	33	ng/L	50		537 (Modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	700		100	41	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	650		100	31	ng/L	50		537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	250		100	39	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5500		100	37	ng/L	50		537 (Modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4R (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS) - DL2	120000	E	340	110	ng/L	100	_	537 (Modified)	Total/NA

Client Sample ID: MW-3R

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	510		2.1	0.63	ng/L	1	_	537 (Modified)	Total/NA
Perfluorobutanoic acid (PFBA) - DL	750	В	110	19	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	2000		110	33	ng/L	50		537 (Modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	530		110	34	ng/L	50		537 (Modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	3000		110	42	ng/L	50		537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	1200		110	39	ng/L	50		537 (Modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	2600		110	37	ng/L	50		537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	2100		170	54	ng/L	50		537 (Modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1R

Date Collected: 09/06/16 16:20

Lab Sample ID: 320-21576-14 Matrix: Water

6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	94	В	2.1	0.38	ng/L		09/10/16 09:06	09/27/16 18:24	1
Perfluorohexanoic acid (PFHxA)	250		2.1	0.65	ng/L		09/10/16 09:06	09/27/16 18:24	1
Perfluoroheptanoic acid (PFHpA)	280		2.1	0.66	ng/L		09/10/16 09:06	09/27/16 18:24	1
Perfluorooctanoic acid (PFOA)	480		2.1	0.62	ng/L		09/10/16 09:06	09/27/16 18:24	1
Perfluorobutanesulfonic acid (PFBS)	35		2.1	0.76	ng/L		09/10/16 09:06	09/27/16 18:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	64		25 - 150				09/10/16 09:06	09/27/16 18:24	1
13C4 PFOA	46		25 - 150				09/10/16 09:06	09/27/16 18:24	1
18O2 PFHxS	70		25 - 150				09/10/16 09:06	09/27/16 18:24	1
13C4-PFHpA	47		25 - 150				09/10/16 09:06	09/27/16 18:24	1
13C4 PFBA	35		25 - 150				09/10/16 09:06	09/27/16 18:24	1
Method: 537 (Modified) - Perfl	uorinated H	lydrocarbo	ons - DL						
A	Beault	Qualifier	PI	MDI	Unit	п	Droparod	Analyzod	Dil Eac

Perfluoropentanoic acid (PFPeA)	390		100	41	ng/L	09/10/16 09:06	09/28/16 13:56	50
Perfluorohexanesulfonic acid	1200		100	36	ng/L	09/10/16 09:06	09/28/16 13:56	50
Perfluorooctanesulfonic acid (PFOS)	6800		160	53	ng/L	09/10/16 09:06	09/28/16 13:56	50
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
18O2 PFHxS	135		25 - 150			09/10/16 09:06	09/28/16 13:56	50
13C4 PFOS	132		25 - 150			09/10/16 09:06	09/28/16 13:56	50
13C5-PFPeA	78		25 - 150			09/10/16 09:06	09/28/16 13:56	50

Client Sample ID: MW-1R (DUP) Date Collected: 09/06/16 16:20 Date Received: 09/08/16 09:55

Lab Sample ID: 320-21576-15 Matrix: Water

Method: 537 (Modified) - Perf	uorinated H	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	98	В	2.1	0.38	ng/L		09/10/16 09:06	09/27/16 18:31	1
Perfluorohexanoic acid (PFHxA)	260		2.1	0.65	ng/L		09/10/16 09:06	09/27/16 18:31	1
Perfluoroheptanoic acid (PFHpA)	300		2.1	0.66	ng/L		09/10/16 09:06	09/27/16 18:31	1
Perfluorooctanoic acid (PFOA)	480		2.1	0.62	ng/L		09/10/16 09:06	09/27/16 18:31	1
Perfluorobutanesulfonic acid (PFBS)	42		2.1	0.76	ng/L		09/10/16 09:06	09/27/16 18:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	65		25 - 150				09/10/16 09:06	09/27/16 18:31	1
13C4 PFOA	47		25 - 150				09/10/16 09:06	09/27/16 18:31	1
18O2 PFHxS	71		25 - 150				09/10/16 09:06	09/27/16 18:31	1
13C4-PFHpA	48		25 - 150				09/10/16 09:06	09/27/16 18:31	1
13C4 PFBA	36		25 - 150				09/10/16 09:06	09/27/16 18:31	1
Method: 537 (Modified) - Perf	uorinated F	lydrocarbo	ons - DL						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	420		100	41	ng/L		09/10/16 09:06	09/28/16 14:04	50
Perfluorohexanesulfonic acid (PFHxS)	1300		100	36	ng/L		09/10/16 09:06	09/28/16 14:04	50
Perfluorooctanesulfonic acid (PFOS)	6300		170	53	ng/L		09/10/16 09:06	09/28/16 14:04	50
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1802 PFHxS	286	*	25 - 150				09/10/16 09:06	09/28/16 14:04	50
13C4 PFOS	278	*	25 - 150				09/10/16 09:06	09/28/16 14:04	50
13C5-PFPeA	183	*	25 - 150				09/10/16 09:06	09/28/16 14:04	50

Client Sample Results

Client Sample ID: MW-2R

Date Collected: 09/06/16 17:15 Date Received: 09/08/16 09:55

Isotope Dilution

13C4 PFOS

Lab Sample ID: 320-21576-16 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1400	В	110	19	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluorohexanoic acid (PFHxA)	4900		110	33	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluoroheptanoic acid (PFHpA)	1200		110	34	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluoropentanoic acid (PFPeA)	5300		110	42	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluorooctanoic acid (PFOA)	720		110	31	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluorobutanesulfonic acid (PFBS)	380		110	39	ng/L		09/10/16 09:06	09/28/16 14:11	50
Perfluorohexanesulfonic acid (PFHxS)	7800		110	37	ng/L		09/10/16 09:06	09/28/16 14:11	50
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	95		25 - 150				09/10/16 09:06	09/28/16 14:11	50
13C4 PFOA	113		25 - 150				09/10/16 09:06	09/28/16 14:11	50
18O2 PFHxS	141		25 - 150				09/10/16 09:06	09/28/16 14:11	50
13C4-PFHpA	91		25 - 150				09/10/16 09:06	09/28/16 14:11	50
13C5-PFPeA	103		25 - 150				09/10/16 09:06	09/28/16 14:11	50
13C4 PFBA	100		25 - 150				09/10/16 09:06	09/28/16 14:11	50
Method: 537 (Modified) - Perfl	uorinated H	lydrocarbo	ons - DL2						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	67000	E	340	110	ng/L		09/10/16 09:06	09/28/16 18:33	100

Limits

25 - 150

%Recovery Qualifier

138



Client Sample ID: MW-4R Date Collected: 09/06/16 18:00

2 3 4 5 6 7 8 9 10 11

Lab	Sample	ID:	320-215	76-17
			Matrix:	Water

Date Received: 09/08/16 09:55									
_ Method: 537 (Modified) - Perfl	uorinated H	lvdrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	200	В	2.1	0.38	ng/L		09/10/16 09:06	09/27/16 19:16	1
Perfluoroheptanoic acid (PFHpA)	230		2.1	0.67	ng/L		09/10/16 09:06	09/27/16 19:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4-PFHpA	34		25 - 150				09/10/16 09:06	09/27/16 19:16	1
13C4 PFBA	26		25 - 150				09/10/16 09:06	09/27/16 19:16	1
	uorinated H	lydrocarbo	ons - DI						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	1200		100	33	ng/L		09/10/16 09:06	09/28/16 14:26	50
Perfluoropentanoic acid (PFPeA)	700		100	41	ng/L		09/10/16 09:06	09/28/16 14:26	50
Perfluorooctanoic acid (PFOA)	650		100	31	ng/L		09/10/16 09:06	09/28/16 14:26	50
Perfluorobutanesulfonic acid (PFBS)	250		100	39	ng/L		09/10/16 09:06	09/28/16 14:26	50
Perfluorohexanesulfonic acid (PFHxS)	5500		100	37	ng/L		09/10/16 09:06	09/28/16 14:26	50
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	180	*	25 - 150				09/10/16 09:06	09/28/16 14:26	50
13C4 PFOA	204	*	25 - 150				09/10/16 09:06	09/28/16 14:26	50
18O2 PFHxS	227	*	25 - 150				09/10/16 09:06	09/28/16 14:26	50
13C5-PFPeA	199	*	25 - 150				09/10/16 09:06	09/28/16 14:26	50
_ Method: 537 (Modified) - Perfl	uorinated H	lvdrocarbo	ons - DL2						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	120000	E	340	110	ng/L		09/10/16 09:06	09/28/16 14:19	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	72		25 - 150				09/10/16 09:06	09/28/16 14:19	100

Lab Sample ID: 320-21576-18 Matrix: Water

5

6

Date Collected: 09/06/16 18:30 Date Received: 09/08/16 09:55

Client Sample ID: MW-3R

Method: 537 (Modified) - Perfl	uorinated H	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	510		2.1	0.63	ng/L		09/10/16 09:06	09/27/16 19:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOA	48		25 - 150				09/10/16 09:06	09/27/16 19:24	1
Method: 537 (Modified) - Perfl	uorinated H	lydrocarbo	ons - DL						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	750	В	110	19	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluorohexanoic acid (PFHxA)	2000		110	33	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluoroheptanoic acid (PFHpA)	530		110	34	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluoropentanoic acid (PFPeA)	3000		110	42	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluorobutanesulfonic acid (PFBS)	1200		110	39	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluorohexanesulfonic acid (PFHxS)	2600		110	37	ng/L		09/10/16 09:06	09/28/16 14:34	50
Perfluorooctanesulfonic acid (PFOS)	2100		170	54	ng/L		09/10/16 09:06	09/28/16 14:34	50
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	187	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50
18O2 PFHxS	217	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50
13C4 PFOS	215	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50
13C4-PFHpA	174	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50
13C5-PFPeA	194	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50
13C4 PFBA	179	*	25 - 150				09/10/16 09:06	09/28/16 14:34	50

Prep Type: Total/NA

5

7

Method: 537 (Modified) - Perfluorinated Hydrocarbons

_								<u>p - 7 p - 1</u>
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)
		3C2 PFHx	3C4 PFO/	3O2 PFHx	3C4 PFO	3C4-PFHp	3C5-PFPe	3C4 PFB
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
320-21576-14	MW-1R	64	46	70		47		35
320-21576-15	MW-1R (DUP)	65	47	71		48		36
320-21576-16 - DL	MW-2R	95	113	141		91	103	100
320-21576-17	MW-4R					34		26
320-21576-17 - DL	MW-4R	180 *	204 *	227 *			199 *	
320-21576-18	MW-3R		48					
Surrogate Legend								
13C2 PFHxA = 13C2 F	PFHxA							
13C4 PFOA = 13C4 P	FOA							
18O2 PFHxS = 18O2 I	PFHxS							
13C4-PFHpA = 13C4-I	PFHpA							
13C5-PFPeA = 13C5-I	PFPeA							
13C4 PEBA = 13C4 P	BA							

			Perce	ent Isotope	Dilution Recovery (Acceptance Limits)
		BO2 PFHx	3C4 PFOS	3C5-PFPe	
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	
320-21576-14 - DL	MW-1R	135	132	78	
320-21576-15 - DL	MW-1R (DUP)	286 *	278 *	183 *	

Surrogate Legend

1802 PFHxS = 1802 PFHxS 13C4 PFOS = 13C4 PFOS 13C5-PFPeA = 13C5-PFPeA

Method: 537 (Modified) - Perfluorinated Hydrocarbons Matrix: Water

Matrix: Water			Prep Type: Total/NA
_			Percent Isotope Dilution Recovery (Acceptance Limits)
		3C4 PFO	
Lab Sample ID	Client Sample ID	(25-150)	
320-21576-16 - DL2	MW-2R	138	
320-21576-17 - DL2	MW-4R	72	
Surragata Lagand			

Surrogate Legend

13C4 PFOS = 13C4 PFOS

Method: 537 (Modified) - Perfluorinated Hydrocarbons Matrix: Water

Matrix: Water							Pre	p Type: Total/NA
			Perce	ent Isotope	Dilution Re	ecovery (Ac	ceptance Lir	nits)
		3C2 PFHx	BO2 PFHx	3C4 PFO	3C4-PFHp	3C5-PFPe	3C4 PFB/	
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	
320-21576-18 - DL	MW-3R	187 *	217 *	215 *	174 *	194 *	179 *	
Surrogate Legend								
13C2 PFHxA = 13C2	PFHxA							

Isotope Dilution Summary

Client: Hyde Environmental, Inc. Project/Site: Fort McCoy PFAS FTBP3 1802 PFHxS = 1802 PFHxS 13C4 PFOS = 13C4 PFOS 13C4-PFHpA = 13C4-PFHpA 13C5-PFPeA = 13C5-PFPeA 13C4 PFBA = 13C4 PFBA TestAmerica Job ID: 320-21576-2

8 9 10 11 12 13

LCMS	

Prep Batch: 126548

_					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21576-14 - DL	MW-1R	Total/NA	Water	3535	
320-21576-14	MW-1R	Total/NA	Water	3535	
320-21576-15 - DL	MW-1R (DUP)	Total/NA	Water	3535	
320-21576-15	MW-1R (DUP)	Total/NA	Water	3535	
320-21576-16 - DL	MW-2R	Total/NA	Water	3535	
320-21576-16 - DL2	MW-2R	Total/NA	Water	3535	
320-21576-17	MW-4R	Total/NA	Water	3535	
320-21576-17 - DL	MW-4R	Total/NA	Water	3535	
320-21576-17 - DL2	MW-4R	Total/NA	Water	3535	
320-21576-18 - DL	MW-3R	Total/NA	Water	3535	
320-21576-18	MW-3R	Total/NA	Water	3535	

Analysis Batch: 129481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21576-14	MW-1R	Total/NA	Water	537 (Modified)	126548
320-21576-15	MW-1R (DUP)	Total/NA	Water	537 (Modified)	126548
320-21576-17	MW-4R	Total/NA	Water	537 (Modified)	126548
320-21576-18	MW-3R	Total/NA	Water	537 (Modified)	126548

Analysis Batch: 129688

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
320-21576-14 - DL	MW-1R	Total/NA	Water	537 (Modified)	126548
320-21576-15 - DL	MW-1R (DUP)	Total/NA	Water	537 (Modified)	126548
320-21576-16 - DL	MW-2R	Total/NA	Water	537 (Modified)	126548
320-21576-17 - DL2	MW-4R	Total/NA	Water	537 (Modified)	126548
320-21576-17 - DL	MW-4R	Total/NA	Water	537 (Modified)	126548
320-21576-18 - DL	MW-3R	Total/NA	Water	537 (Modified)	126548
					120010

Analysis Batch: 129691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-21576-16 - DL2	MW-2R	Total/NA	Water	537 (Modified)	126548

Initial

Amount

303.1 mL

303.1 mL

302.8 mL

Dil

1

50

Dil

1

50

Factor

Factor

Run

DL

DL

Run

DL

DL

Batch

Туре

Prep

Prep

Client Sample ID: MW-1R (DUP)

Batch

Type

Prep

Prep

Analysis

Analysis

Date Collected: 09/06/16 16:20

Date Received: 09/08/16 09:55

Analysis

Analysis

Batch

3535

3535

Batch

3535

3535

Method

537 (Modified)

537 (Modified)

Method

537 (Modified)

537 (Modified)

Client Sample ID: MW-1R

Date Collected: 09/06/16 16:20

Date Received: 09/08/16 09:55

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Analyst

Matrix: Water

Lab

TAL SAC

Lab Sample ID: 320-21576-14

Lab Sample ID: 320-21576-15

Matrix: Water Initial Batch Final Prepared Number Amount Amount or Analyzed Analyst Lab 302.8 mL 126548 09/10/16 09:06 HJA TAL SAC 0.5 mL 09/27/16 18:31 SBC TAL SAC 129481

126548

129688

Batch

Number

126548

Final

Amount

0.5 mL

0.5 mL

Client Sample ID: MW-2R Date Collected: 09/06/16 17:15 Date Received: 09/08/16 09:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		296.9 mL	0.5 mL	126548	09/10/16 09:06	HJA	TAL SAC
Total/NA	Analysis	537 (Modified)	DL	50			129688	09/28/16 14:11	SBC	TAL SAC
Total/NA Total/NA	Prep Analysis	3535 537 (Modified)	DL2 DL2	100	296.9 mL	0.5 mL	126548 129691	09/10/16 09:06 09/28/16 18:33	HJA CBW	TAL SAC TAL SAC

Client Sample ID: MW-4R Date Collected: 09/06/16 18:00 Date Received: 09/08/16 09:55

Batch Dil Initial Batch Batch Final Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 09/10/16 09:06 Prep 3535 297.9 mL 0.5 mL 126548 HJA TAL SAC 09/27/16 19:16 SBC Analysis 537 (Modified) 1 129481 TAL SAC Prep 3535 DL2 297.9 mL 0.5 mL 126548 09/10/16 09:06 HJA TAL SAC DL2 Analysis 537 (Modified) 100 129688 09/28/16 14:19 SBC TAL SAC 3535 DL 297.9 mL 0.5 mL 126548 09/10/16 09:06 HJA TAL SAC Prep

Client Sample ID: MW-3R Date Collected: 09/06/16 18:30 Date Received: 09/08/16 09:55

Analysis

537 (Modified)

DL

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			295.3 mL	0.5 mL	126548	09/10/16 09:06	HJA	TAL SAC

50

TestAmerica Sacramento

129688

Page 15 of 21



129481 09/27/16 18:24 SBC TAL SAC 126548 09/10/16 09:06 HJA TAL SAC 0.5 mL TAL SAC 129688 09/28/16 13:56 SBC

Prepared

or Analyzed

09/10/16 09:06 HJA

09/10/16 09:06 HJA TAL SAC 09/28/16 14:04 SBC TAL SAC

Lab Sample ID: 320-21576-16 Matrix: Water

Lab Sample ID: 320-21576-17

Matrix: Water

TAL SAC

Lab Sample ID: 320-21576-18 Matrix: Water

09/28/16 14:26 SBC

Matrix: Water

Lab Sample ID: 320-21576-18

Client Sample ID: MW-3R Date Collected: 09/06/16 18:30 Date Received: 09/08/16 09:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	537 (Modified)		1			129481	09/27/16 19:24	SBC	TAL SAC
Total/NA	Prep	3535	DL		295.3 mL	0.5 mL	126548	09/10/16 09:06	HJA	TAL SAC
Total/NA	Analysis	537 (Modified)	DL	50			129688	09/28/16 14:34	SBC	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client: Hyde Environmental, Inc. Project/Site: Fort McCoy PFAS FTBP3

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Oregon	NELAP	10	4040	01-29-17

Client: Hyde Environmental, Inc. Project/Site: Fort McCoy PFAS FTBP3

Method	Method Description	Protocol	Laboratory
537 (Modified)	Perfluorinated Hydrocarbons	EPA	Laboratory TAL SAC

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Hyde Environmental, Inc. Project/Site: Fort McCoy PFAS FTBP3

TestAmerica Job ID: 320-21576-2

Project/Site: Fort	McCoy PFAS FTBP3		TestAmerica Job ID. 320-21576-	2
Lab Sample ID	Client Sample ID	Matrix	Collected Received	- 3
320-21576-14	MW-1R	Water	09/06/16 16:20 09/08/16 09:5	5
320-21576-15	MW-1R (DUP)	Water	09/06/16 16:20 09/08/16 09:5	5
320-21576-16	MW-2R	Water	09/06/16 17:15 09/08/16 09:5	5 5
320-21576-17	MW-4R	Water	09/06/16 18:00 09/08/16 09:5	5
320-21576-18	MW-3R	Water	09/06/16 18:30 09/08/16 09:5	⁵ 6
				8
				9
				12
				13

TestAmerica Sacramento								L	ct Amorin	7
880 Riverside Parkway West Sacramento, CA 95605 Phone (916) 373-5600 Fax (916) 372-1059		Chain o	f Cust	ody R	ecord			Die de		580
Client Information	Sampler 2		6	Lab P Fred	A irk Sandia		Carrier Tracking No(s)): COC No.	273.270A 3	Г
	Check and	107461	5	1 40	ורעי ממוחוכה		-	Decer	0.4012-010	Τ
Cirent Contact Jim Lindemann	BLOCK	-		sand	e fredrick@te	stamericainc.com		Page 3	of 3	
Company: Hyde Environmental, Inc.						Analysis Re	quested	# dol		
Address: W175 N11163 Stonewood Drive Suite 110	Due Date Request	ed:			4			Preserv	ation Codes:	Γ
cuy: Germantown	TAT Requested (d	ays):			el l offi			B-NaO C-ZnA	H - Hexane H N - None cetate O - AsNaO2	-
State, Zip WI, 53022					nt Spec			D - Nitric E - NaH	- Acid P - Na2O4S 504 Q - Na2SO3	
Phone. 262-227-5878(Tei)	PO#	r Requested			A Clier			G - Amc G - Amc H - Asco	hior S - H2SO4 hior S - H2SO4 chic Acid T - TSP Dodecahydraf	
Email: jclindemann@hyde-env.com	,# OW				No) No)			rs J-DIW	U - Acetone ater V - MCAA	-
Project Name Fort McCoy PFAS	Project # 32008436				S, Met			L-EDA	A W - PH 4-5 Z - ather (specify)	
Stee of Wellay ETERS	SSOW#				y) asi Aaq - 8			of coi		
	Comolo Deto	Sample (Sample Type C=comp,	Matrix (www.ater, S=solid, 0=wasteroil,	ield Filtered M/2M mrofre FC_IDA_DODe			otal Number		
Sample Identification	Sample Date		Preservatio	n Code:					becial instructions/note.	
ANW-I'R	9/4/10	02.11	٥	Water	7			0		1
Mul- (P. (Dup)	21/10	00011	1	Water				n		
ac-mw		1715		Water				n		
AH-MM		1400						R		
MW- 30	_	1630	_	_	_			n		
					-					
										1
										TT
Possible Hazard Identification	Deison B Unkno	own D _{Rac}	tiological		Sample Di	sposal (A fee may be a may be	assessed if sample Disposal By Lab	es are retained longe	r than 1 month) Months	
Deliverable Requested: I, II, III, IV, Other (specify)					Special Ins	tructions/QC Requireme	ints:			
Empty Ky Relinquished by		Date:			ime:		Method of Shipm	hent		П
Relinquipted by Call	Dated the	sel .	DANS	THE LET	Bener	27.22	-26	Ishe use	S TAWS	Т
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Reinquished by	Date/Time:		00	wedu	Received	1 þy.	Datel	/Time:	Company	-
Custody Seals Intact: Custody Seal No. A Yes A No					Cooler Te	emperature(s) °C and Other R	emarks 40			F -1
					14	11	8 9 10	5 6 7	2345	

Client: Hyde Environmental, Inc.

Login Number: 21576 List Number: 1 Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	ESS Seals
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 320-21576-2

List Source: TestAmerica Sacramento

October 2016 Laboratory Reports

FTBP2



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento 880 Riverside Parkway West Sacramento, CA 95605 Tel: (916)373-5600

TestAmerica Job ID: 320-22766-1

Client Project/Site: Former Fire Training Pit #2, Fort McCoy

For:

Short Elliott Hendrickson, Inc. dba SEH 10 North Bridge Street Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik

Sanda Jeduit

Authorized for release by: 10/31/2016 2:05:02 PM

Sandie Fredrick, Project Manager II (920)261-1660 sandie.fredrick@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Qualifiers

LCMS

Qua	alifier	Qualifier Description
J		Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 320-22766-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-22766-1

Case Narrative

Comments

No additional comments.

Receipt

The samples were received on 10/18/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2° C.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 320-133422.

Method(s) 3535: Due to the excessive amount of sediment in the sample bottles the aqueous portion of these samples was decanted to new bottles prior to spiking and extraction. B-1 (320-22766-1), B-2 (320-22766-2), B-4 (320-22766-4), B-4 DUP (320-22766-5), B-6 (320-22766-7), B-9 (320-22766-10), B-10 (320-22766-11) and B-11 (320-22766-12)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

RL

2.0

2.0

2.0

2.0

2.0

2.0

2.0

2.0

RL

2.0

2.0

2.0

2.0

2.0

2.0

2.0

2.0

MDL Unit

0.90 ng/L

0.45 ng/L

0.85 ng/L

0.97 ng/L

0.78 ng/L

0.77 ng/L

0.73 ng/L

MDL Unit

0.92 ng/L

0.46 ng/L

0.87 ng/L

0.99 ng/L

0.81 ng/L

0.79 ng/L

0.75 ng/L

1.3 ng/L

1.2 ng/L

Result Qualifier

3.7

6.2

88

14

8.3

18

5.5

24

4.1

6.5

36

10

6.6

10

14

81

Result Qualifier

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Client Sample ID: B-1

Perfluorobutanoic acid (PFBA)

Perfluoropentanoic acid (PFPeA)

Perfluoroheptanoic acid (PFHpA)

Perfluorohexanoic acid (PFHxA)

Perfluorooctanesulfonic acid (PFOS)

Perfluorobutanesulfonic acid (PFBS)

Perfluorohexanesulfonic acid (PFHxS)

Perfluorooctanoic acid (PFOA)

Client Sample ID: B-2

Perfluorobutanoic acid (PFBA)

Perfluoropentanoic acid (PFPeA)

Perfluoroheptanoic acid (PFHpA)

Perfluorohexanoic acid (PFHxA)

Perfluorooctanesulfonic acid (PFOS)

Perfluorooctanoic acid (PFOA)

Client Sample ID: B-3

Perfluorobutanesulfonic acid (PFBS)

Perfluorohexanesulfonic acid (PFHxS)

Analyte

Analyte

Lab Sample ID: 320-22766-1

537 (modified)

Lab Sample ID: 320-22766-2

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Dil Fac D Method

1

1

1

1

1

1

1

1

1

1

1

1

1

1

Dil Fac D Method

1 537 (modified) Total/NA 1 537 (modified) Total/NA

Lab Sample ID: 320-22766-3

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	230	1.8	0.84	ng/L	1	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	100	1.8	0.42	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	210	1.8	0.90	ng/L	1	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	130	1.8	0.73	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	300	1.8	0.68	ng/L	1	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	4400	180	79	ng/L	100	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	480	180	72	ng/L	100	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	62000	180	120	ng/L	100	537 (modified)	Total/NA

Client Sample ID: B-4

Lab Sample ID: 320-22766-4

Lab Sample ID: 320-22766-5

Analyte	Result Qua	alifier RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.5	1.9	0.88	ng/L	1	_	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.6	1.9	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	70	1.9	0.83	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.3	1.9	0.95	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	12	1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12	1.9	0.75	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	17	1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) -	810	19	12	ng/L	10		537 (modified)	Total/NA

Client Sample ID: B-4 DUP

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Client Sample ID: B-4 DUP (Continued)

Lab Sample ID: 320-22766-5

Lab Sample ID: 320-22766-6

Lab Sample ID: 320-22766-7

Lab Sample ID: 320-22766-8

5

|1 |2 |3

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.6	1.9	0.89	ng/L	1	_	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.4	1.9	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	70	1.9	0.84	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.2	1.9	0.96	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	12	1.9	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12	1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	17	1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	820	19	12	ng/L	10		537 (modified)	Total/NA

Client Sample ID: B-5

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	120	1.9	0.87	ng/L	1	_	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	330	1.9	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	7400	190	82	ng/L	100		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	730	190	93	ng/L	100		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	1400	190	76	ng/L	100		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	880	190	74	ng/L	100		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	3400	190	71	ng/L	100		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	69000	190	120	ng/L	100		537 (modified)	Total/NA

Client Sample ID: B-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.8		2.0	0.45	ng/L	1	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RA	1.8	J	2.0	0.85	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - RA	1.8	J	2.0	0.97	ng/L	1	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - RA	0.82	J	2.0	0.78	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - RA	2.4		2.0	0.73	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA	3.7		2.0	1.2	ng/L	1	537 (modified)	Total/NA

Client Sample ID: B-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.8	0.85	ng/L	1	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	1.7	J	1.8	0.42	ng/L	1	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	44		1.8	0.80	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.2	J	1.8	0.91	ng/L	1	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.8	0.74	ng/L	1	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.5	J	1.8	0.72	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.1		1.8	0.69	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	140		1.8	1.2	ng/L	1	537 (modified)	Total/NA

Client Sample ID: B-8 Lab Sample ID: 320-22766-9 Analyte Result Qualifier RL MDL Unit Dil Fac D Method Prep Type Perfluorobutanesulfonic acid (PFBS) 1.0 J 2.1 0.95 ng/L 1 537 (modified) Total/NA

This Detection Summary does not include radiochemical test results.
Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Client Sample ID: B-8 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.58	J	2.1	0.48	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.9	J	2.1	1.0	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.9	J	2.1	1.3	ng/L	1	537 (modified)	Total/NA

Client Sample ID: B-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.4		1.9	0.45	ng/L	1	_	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		1.9	0.85	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.9		1.9	0.96	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	4.0		1.9	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.6		1.9	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	32		1.9	1.2	ng/L	1		537 (modified)	Total/NA

Client Sample ID: B-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.46	J	2.0	0.45	ng/L	1	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	2.0	0.86	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.4	J	2.0	0.74	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	1.3	ng/L	1	537 (modified)	Total/NA

Client Sample ID: B-11

Lab Sample ID: 320-22766-12

Lab Sample ID: 320-22766-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac I	D Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	1.0	J	2.0	0.94	ng/L	1	537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	5.8		2.0	0.47	ng/L	1	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	0.89	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.0		2.0	1.0	ng/L	1	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	2.0	0.82	ng/L	1	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0	0.80	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0	0.76	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	29		2.0	1.3	ng/L	1	537 (modified)	Total/NA

Client Sample ID: EQUIPMENT BLANK Lab Sample ID: 320-22									
Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D Method	Prep Type				
Perfluorobutanoic acid (PFBA)	0.95 J	1.9	0.43 ng/L	1	Total/NA				

This Detection Summary does not include radiochemical test results.

Lab Sample ID: 320-22766-9

Lab Sample ID: 320-22766-10

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-1 Matrix: Water

Lab Sample ID: 320-22766-2

Matrix: Water

Date Collected: 10/13/16 14:50 Date Received: 10/18/16 09:40

Client Sample ID: B-1

Method: 537 (modified) - Perfl	uorinated H	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	3.7		2.0	0.90	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluorobutanoic acid (PFBA)	6.2		2.0	0.45	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluorohexanesulfonic acid (PFHxS)	88		2.0	0.85	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluoropentanoic acid (PFPeA)	14		2.0	0.97	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluoroheptanoic acid (PFHpA)	8.3		2.0	0.78	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluorohexanoic acid (PFHxA)	18		2.0	0.77	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluorooctanoic acid (PFOA)	5.5		2.0	0.73	ng/L		10/19/16 15:23	10/25/16 22:12	1
Perfluorooctanesulfonic acid (PFOS)	24		2.0	1.2	ng/L		10/19/16 15:23	10/25/16 22:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	107		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C4-PFHpA	75		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C4 PFOA	76		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C4 PFOS	115		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C4 PFBA	47		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C2 PFHxA	79		25 - 150				10/19/16 15:23	10/25/16 22:12	1
13C5 PFPeA	80		25 - 150				10/19/16 15:23	10/25/16 22:12	1

Client Sample ID: B-2 Date Collected: 10/13/16 16:20 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perf	luorinated H	lydrocarb	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	4.1		2.0	0.92	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluorobutanoic acid (PFBA)	6.5		2.0	0.46	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluorohexanesulfonic acid (PFHxS)	36		2.0	0.87	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluoropentanoic acid (PFPeA)	10		2.0	0.99	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluoroheptanoic acid (PFHpA)	6.6		2.0	0.81	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluorohexanoic acid (PFHxA)	10		2.0	0.79	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluorooctanoic acid (PFOA)	14		2.0	0.75	ng/L		10/19/16 15:23	10/25/16 22:19	1
Perfluorooctanesulfonic acid (PFOS)	81		2.0	1.3	ng/L		10/19/16 15:23	10/25/16 22:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	107		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C4-PFHpA	66		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C4 PFOA	63		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C4 PFOS	110		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C4 PFBA	44		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C2 PFHxA	70		25 - 150				10/19/16 15:23	10/25/16 22:19	1
13C5 PFPeA	70		25 - 150				10/19/16 15:23	10/25/16 22:19	1

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-3 Matrix: Water

Lab Sample ID: 320-22766-4

Matrix: Water

Date Collected: 10/13/16 15:45 Date Received: 10/18/16 09:40

Client Sample ID: B-3

Method: 537 (modified) - Perf	uorinated H	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	230		1.8	0.84	ng/L		10/19/16 15:23	10/25/16 22:27	1
Perfluorobutanoic acid (PFBA)	100		1.8	0.42	ng/L		10/19/16 15:23	10/25/16 22:27	1
Perfluoropentanoic acid (PFPeA)	210		1.8	0.90	ng/L		10/19/16 15:23	10/25/16 22:27	1
Perfluoroheptanoic acid (PFHpA)	130		1.8	0.73	ng/L		10/19/16 15:23	10/25/16 22:27	1
Perfluorooctanoic acid (PFOA)	300		1.8	0.68	ng/L		10/19/16 15:23	10/25/16 22:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	51		25 - 150				10/19/16 15:23	10/25/16 22:27	1
13C4-PFHpA	44		25 - 150				10/19/16 15:23	10/25/16 22:27	1
13C4 PFOA	71		25 - 150				10/19/16 15:23	10/25/16 22:27	1
13C4 PFBA	34		25 - 150				10/19/16 15:23	10/25/16 22:27	1
13C5 PFPeA	67		25 - 150				10/19/16 15:23	10/25/16 22:27	1

Method: 537 (modified) - Perfluorinated Hydrocarbons - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	4400		180	79	ng/L		10/19/16 15:23	10/26/16 18:18	100
Perfluorohexanoic acid (PFHxA)	480		180	72	ng/L		10/19/16 15:23	10/26/16 18:18	100
Perfluorooctanesulfonic acid (PFOS)	62000		180	120	ng/L		10/19/16 15:23	10/26/16 18:18	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	108		25 - 150				10/19/16 15:23	10/26/16 18:18	100
13C4 PFOS	100		25 - 150				10/19/16 15:23	10/26/16 18:18	100
13C2 PFHxA	80		25 - 150				10/19/16 15:23	10/26/16 18:18	100

Client Sample ID: B-4

Date Collected: 10/14/16 11:20 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perfluorinated Hydrocarbons Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 1.9 0.88 ng/L 10/19/16 15:23 10/25/16 22:34 Perfluorobutanesulfonic acid 2.5 1 (PFBS) Perfluorobutanoic acid (PFBA) 1.9 0.44 ng/L 10/19/16 15:23 10/25/16 22:34 7.6 1 10/19/16 15:23 10/25/16 22:34 Perfluorohexanesulfonic acid 70 1.9 0.83 ng/L 1 (PFHxS) Perfluoropentanoic acid (PFPeA) 1.9 0.95 ng/L 10/19/16 15:23 10/25/16 22:34 9.3 1 1.9 0.77 ng/L 10/19/16 15:23 10/25/16 22:34 Perfluoroheptanoic acid (PFHpA) 12 1 Perfluorohexanoic acid (PFHxA) 12 1.9 0.75 ng/L 10/19/16 15:23 10/25/16 22:34 1 Perfluorooctanoic acid (PFOA) 17 1.9 0.72 ng/L 10/19/16 15:23 10/25/16 22:34 1 Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 18O2 PFHxS 102 25 - 150 10/19/16 15:23 10/25/16 22:34 1 13C4-PFHpA 10/19/16 15:23 10/25/16 22:34 64 25 - 150 1 13C4 PFOA 71 25 - 150 10/19/16 15:23 10/25/16 22:34 1 13C4 PFBA 43 25 - 150 10/19/16 15:23 10/25/16 22:34 1 13C2 PFHxA 65 25 - 150 10/19/16 15:23 10/25/16 22:34 1 13C5 PFPeA 64 25 - 150 10/19/16 15:23 10/25/16 22:34 1

Client Sample Results Client: Short Elliott Hendrickson, Inc. dba SEH TestAmerica Job ID: 320-22766-1 Project/Site: Former Fire Training Pit #2, Fort McCoy **Client Sample ID: B-4** Lab Sample ID: 320-22766-4 Date Collected: 10/14/16 11:20 Matrix: Water Date Received: 10/18/16 09:40 Method: 537 (modified) - Perfluorinated Hydrocarbons - DL Analyte Result Qualifier MDL Unit Prepared Analyzed RL D Dil Fac 19 12 ng/L 10/19/16 15:23 10/26/16 18:56 Perfluorooctanesulfonic acid 810 (PFOS) Isotope Dilution Prepared Dil Fac %Recovery Qualifier Limits Analyzed 13C4 PFOS 116 25 - 150 10/19/16 15:23 10/26/16 18:56 **Client Sample ID: B-4 DUP** Lab Sample ID: 320-22766-5 Date Collected: 10/14/16 11:30 Matrix: Water Date Received: 10/18/16 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid	2.6		1.9	0.89	ng/L		10/19/16 15:23	10/25/16 22:42	1
(PFBS)									
Perfluorobutanoic acid (PFBA)	7.4		1.9	0.44	ng/L		10/19/16 15:23	10/25/16 22:42	1
Perfluorohexanesulfonic acid (PFHxS)	70		1.9	0.84	ng/L		10/19/16 15:23	10/25/16 22:42	1
Perfluoropentanoic acid (PFPeA)	9.2		1.9	0.96	ng/L		10/19/16 15:23	10/25/16 22:42	1
Perfluoroheptanoic acid (PFHpA)	12		1.9	0.78	ng/L		10/19/16 15:23	10/25/16 22:42	1
Perfluorohexanoic acid (PFHxA)	12		1.9	0.76	ng/L		10/19/16 15:23	10/25/16 22:42	1
Perfluorooctanoic acid (PFOA)	17		1.9	0.72	ng/L		10/19/16 15:23	10/25/16 22:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150				10/19/16 15:23	10/25/16 22:42	1
13C4-PFHpA	69		25 - 150				10/19/16 15:23	10/25/16 22:42	1
13C4 PFOA	74		25 - 150				10/19/16 15:23	10/25/16 22:42	1
13C4 PFBA	46		25 - 150				10/19/16 15:23	10/25/16 22:42	1
13C2 PFHxA	71		25 - 150				10/19/16 15:23	10/25/16 22:42	1
	72		25 - 150				10/19/16 15·23	10/25/16 22:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	820		19	12	ng/L		10/19/16 15:23	10/26/16 19:03	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	100		25 - 150				10/19/16 15:23	10/26/16 19:03	10

Client Sample ID: B-5 Date Collected: 10/14/16 11:00 Date Received: 10/18/16 09:40

Method: 537 (modified) - Per	fluorinated F	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	120		1.9	0.87	ng/L		10/19/16 15:23	10/25/16 22:49	1
Perfluorobutanoic acid (PFBA)	330		1.9	0.43	ng/L		10/19/16 15:23	10/25/16 22:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	38		25 - 150				10/19/16 15:23	10/25/16 22:49	1
13C4 PFBA	44		25 - 150				10/19/16 15:23	10/25/16 22:49	1

Lab Sample ID: 320-22766-6

Matrix: Water

10

10

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-6 Matrix: Water

Lab Sample ID: 320-22766-7

Matrix: Water

Client Sample ID: B-5 Date Collected: 10/14/16 11:00 Date Received: 10/18/16 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	7400		190	82	ng/L		10/19/16 15:23	10/26/16 18:26	100
Perfluoropentanoic acid (PFPeA)	730		190	93	ng/L		10/19/16 15:23	10/26/16 18:26	100
Perfluoroheptanoic acid (PFHpA)	1400		190	76	ng/L		10/19/16 15:23	10/26/16 18:26	100
Perfluorohexanoic acid (PFHxA)	880		190	74	ng/L		10/19/16 15:23	10/26/16 18:26	100
Perfluorooctanoic acid (PFOA)	3400		190	71	ng/L		10/19/16 15:23	10/26/16 18:26	100
Perfluorooctanesulfonic acid (PFOS)	69000		190	120	ng/L		10/19/16 15:23	10/26/16 18:26	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4-PFHpA	82		25 - 150				10/19/16 15:23	10/26/16 18:26	100
13C4 PFOA	102		25 - 150				10/19/16 15:23	10/26/16 18:26	100
13C4 PFOS	85		25 - 150				10/19/16 15:23	10/26/16 18:26	100
13C2 PFHxA	78		25 - 150				10/19/16 15:23	10/26/16 18:26	100
13C5 PFPeA	86		25 - 150				10/19/16 15:23	10/26/16 18:26	100

Client Sample ID: B-6

Date Collected: 10/14/16 10:15 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perfluorinated Hydrocarbons											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Perfluorobutanesulfonic acid (PFBS)	<0.90		2.0	0.90	ng/L		10/19/16 15:23	10/25/16 22:57	1		
Perfluorobutanoic acid (PFBA)	2.8		2.0	0.45	ng/L		10/19/16 15:23	10/25/16 22:57	1		
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac		
18O2 PFHxS	100		25 - 150				10/19/16 15:23	10/25/16 22:57	1		
13C4 PFBA	50		25 - 150				10/19/16 15:23	10/25/16 22:57	1		

Method: 537 (modified) - Perf	uorinated F	lydrocarbo	ons - RA						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid	1.8	J	2.0	0.85	ng/L		10/19/16 15:23	10/26/16 20:11	1
(PFHxS)									
Perfluoropentanoic acid (PFPeA)	1.8	J	2.0	0.97	ng/L		10/19/16 15:23	10/26/16 20:11	1
Perfluoroheptanoic acid (PFHpA)	0.82	J	2.0	0.78	ng/L		10/19/16 15:23	10/26/16 20:11	1
Perfluorohexanoic acid (PFHxA)	<0.77		2.0	0.77	ng/L		10/19/16 15:23	10/26/16 20:11	1
Perfluorooctanoic acid (PFOA)	2.4		2.0	0.73	ng/L		10/19/16 15:23	10/26/16 20:11	1
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	1.2	ng/L		10/19/16 15:23	10/26/16 20:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4-PFHpA	67		25 - 150				10/19/16 15:23	10/26/16 20:11	1
13C4 PFOA	65		25 - 150				10/19/16 15:23	10/26/16 20:11	1
13C4 PFOS	112		25 - 150				10/19/16 15:23	10/26/16 20:11	1
13C2 PFHxA	70		25 - 150				10/19/16 15:23	10/26/16 20:11	1
13C5 PFPeA	73		25 - 150				10/19/16 15:23	10/26/16 20:11	1

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Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-8 Matrix: Water

Lab Sample ID: 320-22766-9

Matrix: Water

Date Collected: 10/14/16 09:15 Date Received: 10/18/16 09:40

Client Sample ID: B-7

Method: 537 (modified) - Perf	uorinated H	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.8	0.85	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluorobutanoic acid (PFBA)	1.7	J	1.8	0.42	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluorohexanesulfonic acid (PFHxS)	44		1.8	0.80	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluoropentanoic acid (PFPeA)	1.2	J	1.8	0.91	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.8	0.74	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluorohexanoic acid (PFHxA)	1.5	J	1.8	0.72	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluorooctanoic acid (PFOA)	5.1		1.8	0.69	ng/L		10/19/16 15:23	10/25/16 23:34	1
Perfluorooctanesulfonic acid (PFOS)	140		1.8	1.2	ng/L		10/19/16 15:23	10/25/16 23:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C4-PFHpA	66		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C4 PFOA	66		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C4 PFOS	103		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C4 PFBA	36		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C2 PFHxA	69		25 - 150				10/19/16 15:23	10/25/16 23:34	1
13C5 PFPeA	64		25 - 150				10/19/16 15:23	10/25/16 23:34	1

Client Sample ID: B-8 Date Collected: 10/14/16 09:50 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perfl	uorinated F	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid	1.0	J	2.1	0.95	ng/L		10/19/16 15:23	10/25/16 23:42	1
(PFBS)									
Perfluorobutanoic acid (PFBA)	0.58	J	2.1	0.48	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.90		2.1	0.90	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluoropentanoic acid (PFPeA)	1.9	J	2.1	1.0	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluoroheptanoic acid (PFHpA)	<0.83		2.1	0.83	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluorohexanoic acid (PFHxA)	<0.82		2.1	0.82	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluorooctanoic acid (PFOA)	<0.78		2.1	0.78	ng/L		10/19/16 15:23	10/25/16 23:42	1
Perfluorooctanesulfonic acid (PFOS)	1.9	J	2.1	1.3	ng/L		10/19/16 15:23	10/25/16 23:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	101		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C4-PFHpA	83		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C4 PFOA	90		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C4 PFOS	107		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C4 PFBA	61		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C2 PFHxA	88		25 - 150				10/19/16 15:23	10/25/16 23:42	1
13C5 PFPeA	94		25 - 150				10/19/16 15:23	10/25/16 23:42	1

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-10 Matrix: Water

Lab Sample ID: 320-22766-11

Date Collected: 10/13/16 13:50 Date Received: 10/18/16 09:40

Client Sample ID: B-9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<0.89		1.9	0.89	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluorobutanoic acid (PFBA)	6.4		1.9	0.45	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		1.9	0.85	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluoropentanoic acid (PFPeA)	2.9		1.9	0.96	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluoroheptanoic acid (PFHpA)	4.0		1.9	0.78	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluorohexanoic acid (PFHxA)	4.4		1.9	0.76	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluorooctanoic acid (PFOA)	4.6		1.9	0.73	ng/L		10/19/16 15:23	10/25/16 23:49	1
Perfluorooctanesulfonic acid (PFOS)	32		1.9	1.2	ng/L		10/19/16 15:23	10/25/16 23:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	104		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C4-PFHpA	86		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C4 PFOA	83		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C4 PFOS	108		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C4 PFBA	66		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C2 PFHxA	94		25 - 150				10/19/16 15:23	10/25/16 23:49	1
13C5 PFPeA	94		25 - 150				10/19/16 15:23	10/25/16 23:49	1

Client Sample ID: B-10 Date Collected: 10/13/16 13:20 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perfluorinated Hydrocarbons Result Qualifier MDL Unit Dil Fac Analyte RL D Prepared Analyzed Perfluorobutanesulfonic acid (PFBS) <0.91 2.0 0.91 ng/L 10/19/16 15:23 10/25/16 23:57 1 Perfluorobutanoic acid (PFBA) 2.0 0.45 ng/L 10/19/16 15:23 10/25/16 23:57 0.46 J 1 0.86 ng/L 10/19/16 15:23 10/25/16 23:57 Perfluorohexanesulfonic acid 1.0 J 2.0 1 (PFHxS) 2.0 Perfluoropentanoic acid (PFPeA) < 0.98 0.98 ng/L 10/19/16 15:23 10/25/16 23:57 Perfluoroheptanoic acid (PFHpA) <0.79 2.0 0.79 ng/L 10/19/16 15:23 10/25/16 23:57 1 Perfluorohexanoic acid (PFHxA) <0.78 2.0 0.78 ng/L 10/19/16 15:23 10/25/16 23:57 1 Perfluorooctanoic acid (PFOA) 2.0 0.74 ng/L 10/19/16 15:23 10/25/16 23:57 1 1.4 J 1.3 ng/L Perfluorooctanesulfonic acid 3.4 2.0 10/19/16 15:23 10/25/16 23:57 1 (PFOS) Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1802 PFHxS 107 25 - 150 10/19/16 15:23 10/25/16 23:57 1 13C4-PFHpA 54 25 - 150 10/19/16 15:23 10/25/16 23:57 1 13C4 PFOA 55 25 - 150 10/19/16 15:23 10/25/16 23:57 1 25 - 150 13C4 PFOS 109 10/19/16 15:23 10/25/16 23:57 1 13C4 PFBA 45 25 - 150 10/19/16 15:23 10/25/16 23:57 1 13C2 PFHxA 52 25 - 150 10/19/16 15:23 10/25/16 23:57 1 13C5 PFPeA 55 25 - 150 10/19/16 15:23 10/25/16 23:57 1

Matrix: Water

5

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-12 Matrix: Water

Lab Sample ID: 320-22766-13

Matrix: Water

6

Date Collected: 10/13/16 12:00 Date Received: 10/18/16 09:40

Client Sample ID: B-11

Method: 537 (modified) - Perf	uorinated F	lydrocarbo	ons						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	1.0	J	2.0	0.94	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluorobutanoic acid (PFBA)	5.8		2.0	0.47	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	0.89	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluoropentanoic acid (PFPeA)	4.0		2.0	1.0	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluoroheptanoic acid (PFHpA)	1.6	J	2.0	0.82	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluorohexanoic acid (PFHxA)	3.6		2.0	0.80	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluorooctanoic acid (PFOA)	3.6		2.0	0.76	ng/L		10/19/16 15:23	10/26/16 00:04	1
Perfluorooctanesulfonic acid (PFOS)	29		2.0	1.3	ng/L		10/19/16 15:23	10/26/16 00:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1802 PFHxS	99		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C4-PFHpA	89		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C4 PFOA	87		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C4 PFOS	103		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C4 PFBA	62		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C2 PFHxA	94		25 - 150				10/19/16 15:23	10/26/16 00:04	1
13C5 PFPeA	94		25 - 150				10/19/16 15:23	10/26/16 00:04	1

Client Sample ID: EQUIPMENT BLANK Date Collected: 10/14/16 11:45 Date Received: 10/18/16 09:40

Method: 537 (modified) - Perfluorinated Hydrocarbons Result Qualifier Analyte RL MDL Unit D Prepared Analyzed Dil Fac Perfluorobutanesulfonic acid (PFBS) <0.86 1.9 0.86 ng/L 10/19/16 15:23 10/26/16 00:12 1 Perfluorobutanoic acid (PFBA) 0.95 J 1.9 0.43 ng/L 10/19/16 15:23 10/26/16 00:12 1 0.82 ng/L Perfluorohexanesulfonic acid (PFHxS) <0.82 1.9 10/19/16 15:23 10/26/16 00:12 1 Perfluoropentanoic acid (PFPeA) < 0.93 1.9 0.93 ng/L 10/19/16 15:23 10/26/16 00:12 1 Perfluoroheptanoic acid (PFHpA) <0.75 0.75 ng/L 1.9 10/19/16 15:23 10/26/16 00:12 1 Perfluorohexanoic acid (PFHxA) < 0.74 1.9 0.74 ng/L 10/19/16 15:23 10/26/16 00:12 1 Perfluorooctanoic acid (PFOA) < 0.70 1.9 0.70 ng/L 10/19/16 15:23 10/26/16 00:12 1 Perfluorooctanesulfonic acid (PFOS) 1.2 ng/L 10/19/16 15:23 10/26/16 00:12 <1.2 1.9 1 %Recovery Qualifier Isotope Dilution Limits Prepared Analyzed Dil Fac 1802 PFHxS 100 25 - 150 10/19/16 15:23 10/26/16 00:12 1 13C4-PFHpA 80 25 - 150 10/19/16 15:23 10/26/16 00:12 1 72 13C4 PFOA 25 - 150 10/19/16 15:23 10/26/16 00:12 1 13C4 PFOS 101 10/19/16 15:23 10/26/16 00:12 25 - 150 1 13C4 PFBA 100 25 - 150 10/19/16 15:23 10/26/16 00:12 1 13C2 PFHxA 25 - 150 10/19/16 15:23 10/26/16 00:12 98 1 13C5 PFPeA 10/19/16 15:23 10/26/16 00:12 114 25 - 150 1

Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Prep Type: Total/NA

Method: 537 (modified) - Perfluorinated Hydrocarbons

Matrix: Water

-		Percent Isotope Dilution Recovery (Acceptance Limits)								
		BO2 PFHx	3C4-PFHp	3C4 PFO/	3C4 PFO	3C4 PFB/	3C2 PFHx	3C5 PFPe		
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)		
320-22766-1	B-1	107	75	76	115	47	79	80		
320-22766-2	B-2	107	66	63	110	44	70	70		
320-22766-3	B-3	51	44	71		34		67		
320-22766-3 - DL	B-3	108			100		80			
320-22766-4	B-4	102	64	71		43	65	64		
320-22766-4 - DL	B-4				116					
320-22766-5	B-4 DUP	98	69	74		46	71	72		
320-22766-5 - DL	B-4 DUP				100					
320-22766-6	B-5	38				44				
320-22766-6 - DL	B-5		82	102	85		78	86		
320-22766-7	B-6	100				50				
320-22766-7 - RA	B-6		67	65	112		70	73		
320-22766-8	B-7	98	66	66	103	36	69	64		
320-22766-9	B-8	101	83	90	107	61	88	94		
320-22766-10	B-9	104	86	83	108	66	94	94		
320-22766-11	B-10	107	54	55	109	45	52	55		
320-22766-12	B-11	99	89	87	103	62	94	94		
320-22766-13	EQUIPMENT BLANK	100	80	72	101	100	98	114		
LCS 320-133422/2-A	Lab Control Sample	100	101	110	104	109	106	108		
LCSD 320-133422/3-A	Lab Control Sample Dup	104	106	109	107	114	108	109		
MB 320-133422/1-A	Method Blank	97	105	112	97	106	100	104		

Surrogate Legend

1802 PFHxS = 1802 PFHxS 13C4-PFHpA = 13C4-PFHpA 13C4 PFOA = 13C4 PFOA 13C4 PFOS = 13C4 PFOS 13C4 PFBA = 13C4 PFBA 13C2 PFHxA = 13C2 PFHxA 13C5 PFPeA = 13C5 PFPeA

10/31/2016

QC Sample Results

Method: 537 (modified) - Perfluorinated Hydrocarbons

Lab Sample ID: MB 320-13342 Matrix: Water Analysis Batch: 134487	2/1 -A						Client Samp	le ID: Method Prep Type: To Prep Batch:	I Blank otal/NA 133422
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<0.92		2.0	0.92	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluorobutanoic acid (PFBA)	<0.46		2.0	0.46	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.87		2.0	0.87	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluoropentanoic acid (PFPeA)	<0.99		2.0	0.99	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluoroheptanoic acid (PFHpA)	<0.80		2.0	0.80	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluorohexanoic acid (PFHxA)	<0.79		2.0	0.79	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluorooctanoic acid (PFOA)	<0.75		2.0	0.75	ng/L		10/19/16 15:23	10/25/16 21:49	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		2.0	1.3	ng/L		10/19/16 15:23	10/25/16 21:49	1
	МВ	МВ							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	97		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C4-PFHpA	105		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C4 PFOA	112		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C4 PFOS	97		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C4 PFBA	106		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C2 PFHxA	100		25 - 150				10/19/16 15:23	10/25/16 21:49	1
13C5 PFPeA	104		25 - 150				10/19/16 15:23	10/25/16 21:49	1

Lab Sample ID: LCS 320-133422/2-A Matrix: Water 124497

Analysis Batch: 134487							Prep Batch: 133422
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluorobutanesulfonic acid (PFBS)	35.4	40.5		ng/L		115	55 - 147
Perfluorobutanoic acid (PFBA)	40.0	44.8		ng/L		112	74 - 138
Perfluorohexanesulfonic acid (PFHxS)	36.4	38.1		ng/L		105	58 - 138
Perfluoropentanoic acid (PFPeA)	40.0	39.9		ng/L		100	69 - 134
Perfluoroheptanoic acid (PFHpA)	40.0	41.7		ng/L		104	63 - 135
Perfluorohexanoic acid (PFHxA)	40.0	40.9		ng/L		102	70 - 136
Perfluorooctanoic acid (PFOA)	40.0	39.8		ng/L		100	63 - 141
Perfluorooctanesulfonic acid (PFOS)	37.1	37.1		ng/L		100	47 - 162

	LCS	LCS	
Isotope Dilution	%Recovery	Qualifier	Limits
18O2 PFHxS	100		25 - 150
13C4-PFHpA	101		25 - 150
13C4 PFOA	110		25 - 150
13C4 PFOS	104		25 - 150
13C4 PFBA	109		25 - 150
13C2 PFHxA	106		25 - 150
13C5 PFPeA	108		25 - 150

5

Client Sample ID: Lab Control Sample Prep Type: Total/NA

QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCSD 320 Matrix: Water Analysis Batch: 134487	-133422/3-A					Client Sa	ample	ID: Lat	Prep Typ Prep Ba	Sample be: Tot atch: 13	Dup al/NA 33422
			Spike	LCSD	LCSD		_	~-	%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanesulfonic acid (PFBS)			35.4	39.4		ng/L		111	55 ₋ 147	3	30
Perfluorobutanoic acid (PFBA)			40.0	42.7		ng/L		107	74 - 138	5	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	36.3		ng/L		100	58 - 138	5	30
Perfluoropentanoic acid (PFPeA)			40.0	39.0		ng/L		98	69 - 134	2	30
Perfluoroheptanoic acid (PFHpA)			40.0	40.1		ng/L		100	63 - 135	4	30
Perfluorohexanoic acid (PFHxA)			40.0	40.6		ng/L		102	70 - 136	1	30
Perfluorooctanoic acid (PFOA)			40.0	40.7		ng/L		102	63 - 141	2	30
Perfluorooctanesulfonic acid (PFOS)			37.1	36.5		ng/L		98	47 - 162	1	30
	LCSD	LCSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
18O2 PFHxS	104		25 - 150								
13C4-PFHpA	106		25 - 150								
13C4 PFOA	109		25 - 150								
13C4 PFOS	107		25 - 150								
13C4 PFBA	114		25 - 150								
13C2 PFHxA	108		25 - 150								
13C5 PFPeA	109		25 - 150								

QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

LCMS

Prep Batch: 133422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-22766-1	B-1	Total/NA	Water	3535	
320-22766-2	B-2	Total/NA	Water	3535	
320-22766-3	B-3	Total/NA	Water	3535	
320-22766-3 - DL	В-3	Total/NA	Water	3535	
320-22766-4	B-4	Total/NA	Water	3535	
320-22766-4 - DL	B-4	Total/NA	Water	3535	
320-22766-5	B-4 DUP	Total/NA	Water	3535	
320-22766-5 - DL	B-4 DUP	Total/NA	Water	3535	
320-22766-6 - DL	B-5	Total/NA	Water	3535	
320-22766-6	B-5	Total/NA	Water	3535	
320-22766-7	B-6	Total/NA	Water	3535	
320-22766-7 - RA	B-6	Total/NA	Water	3535	
320-22766-8	B-7	Total/NA	Water	3535	
320-22766-9	B-8	Total/NA	Water	3535	
320-22766-10	B-9	Total/NA	Water	3535	
320-22766-11	B-10	Total/NA	Water	3535	
320-22766-12	B-11	Total/NA	Water	3535	
320-22766-13	EQUIPMENT BLANK	Total/NA	Water	3535	
MB 320-133422/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-133422/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-133422/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 134487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-22766-1	B-1	Total/NA	Water	537 (modified)	133422
320-22766-2	B-2	Total/NA	Water	537 (modified)	133422
320-22766-3	B-3	Total/NA	Water	537 (modified)	133422
320-22766-4	B-4	Total/NA	Water	537 (modified)	133422
320-22766-5	B-4 DUP	Total/NA	Water	537 (modified)	133422
320-22766-6	B-5	Total/NA	Water	537 (modified)	133422
320-22766-7	B-6	Total/NA	Water	537 (modified)	133422
320-22766-8	B-7	Total/NA	Water	537 (modified)	133422
320-22766-9	B-8	Total/NA	Water	537 (modified)	133422
320-22766-10	B-9	Total/NA	Water	537 (modified)	133422
320-22766-11	B-10	Total/NA	Water	537 (modified)	133422
320-22766-12	B-11	Total/NA	Water	537 (modified)	133422
320-22766-13	EQUIPMENT BLANK	Total/NA	Water	537 (modified)	133422
MB 320-133422/1-A	Method Blank	Total/NA	Water	537 (modified)	133422
LCS 320-133422/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	133422
LCSD 320-133422/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	133422

Analysis Batch: 134710

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
320-22766-3 - DL	B-3	Total/NA	Water	537 (modified)	133422
320-22766-4 - DL	B-4	Total/NA	Water	537 (modified)	133422
320-22766-5 - DL	B-4 DUP	Total/NA	Water	537 (modified)	133422
320-22766-6 - DL	B-5	Total/NA	Water	537 (modified)	133422
320-22766-7 - RA	B-6	Total/NA	Water	537 (modified)	133422

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-1 Matrix: Water

	Prenared			Ç
		N	latrix: Water	8
-	ah Samnlo	<u>۲</u> ۰ 32	0-22766-2	
,	10/25/16 22:12	SBC	TAL SAC	
	10/19/10 15.25	JER	TAL SAC	

Client Sample ID: B-1 Date Collected: 10/13/16 14:50 Date Received: 10/18/16 09:40

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			256.1 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 22:12	SBC	TAL SAC

Client Sample ID: B-2 Date Collected: 10/13/16 16:20 Date Received: 10/18/16 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			248.8 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 22:19	SBC	TAL SAC

Client Sample ID: B-3 Date Collected: 10/13/16 15:45 Date Received: 10/18/16 09:40

Prep Type Total/NA Total/NA	Batch Type Prep Analvsis	Batch Method 3535 537 (modified)	Run	Dil Factor	Initial Amount 274.7 mL	Final Amount 0.5 mL	Batch Number 133422 134487	Prepared or Analyzed 10/19/16 15:23 10/25/16 22:27	Analyst JER SBC	Lab TAL SAC TAL SAC
Total/NA Total/NA	Prep Analysis	3535 537 (modified)	DL DL	100	274.7 mL	0.5 mL	133422 134710	10/19/16 15:23 10/26/16 18:18	JER SBC	TAL SAC TAL SAC

Client Sample ID: B-4 Date Collected: 10/14/16 11:20 Date Received: 10/18/16 09:40

Date Receive	u. 10/16/16 0	5.40								
—	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 22:34	SBC	TAL SAC
Total/NA	Prep	3535	DL		261 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			134710	10/26/16 18:56	SBC	TAL SAC

Client Sample ID: B-4 DUP Date Collected: 10/14/16 11:30 Date Received: 10/18/16 09:40

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			258.3 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 22:42	SBC	TAL SAC
Total/NA	Prep	3535	DL		258.3 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			134710	10/26/16 19:03	SBC	TAL SAC

Lab Sample ID: 320-22766-4 Matrix: Water

Lab Sample ID: 320-22766-5 Matrix: Water

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Client Sample ID: B-5 Lab Sample ID: 320-22766-6 Date Collected: 10/14/16 11:00 Matrix: Water Date Received: 10/18/16 09:40 Batch Batch Dil Initial Final Batch Prepared Prep Type Type Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 3535 265.2 mL 0.5 mL 133422 10/19/16 15:23 JER TAL SAC Total/NA Analysis 537 (modified) 134487 10/25/16 22:49 SBC TAL SAC 1 Total/NA Prep 3535 DL 265.2 mL 0.5 mL 133422 10/19/16 15:23 JER TAL SAC Total/NA Analysis 537 (modified) DL 100 134710 10/26/16 18:26 SBC TAL SAC **Client Sample ID: B-6** Lab Sample ID: 320-22766-7

Date Collected: 10/14/16 10:15 Date Received: 10/18/16 09:40

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			255.6 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 22:57	SBC	TAL SAC
Total/NA	Prep	3535	RA		255.6 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)	RA	1			134710	10/26/16 20:11	SBC	TAL SAC

Client Sample ID: B-7 Date Collected: 10/14/16 09:15 Date Received: 10/18/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			271.5 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 23:34	SBC	TAL SAC

Client Sample ID: B-8 Date Collected: 10/14/16 09:50 Date Received: 10/18/16 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			240.9 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 23:42	SBC	TAL SAC

Client Sample ID: B-9 Date Collected: 10/13/16 13:50 Date Received: 10/18/16 09:40

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			256.9 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 23:49	SBC	TAL SAC

TestAmerica Sacramento

Lab Sample ID: 320-22766-8 Matrix: Water

Lab Sample ID: 320-22766-9

Lab Sample ID: 320-22766-10

Matrix: Water

Matrix: Water

Matrix: Water

Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Lab Sample ID: 320-22766-11

Lab Sample ID: 320-22766-12

Lab Sample ID: 320-22766-13

Matrix: Water

Matrix: Water

Matrix: Water

Client Sample ID: B-10 Date Collected: 10/13/16 13:20

Bato	0011001001	10/10/10	
Date	Received:	10/18/16	09:40

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			252.8 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/25/16 23:57	SBC	TAL SAC

Client Sample ID: B-11 Date Collected: 10/13/16 12:00 Date Received: 10/18/16 09:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244.6 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/26/16 00:04	SBC	TAL SAC

Client Sample ID: EQUIPMENT BLANK Date Collected: 10/14/16 11:45 Date Received: 10/18/16 09:40

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			265.7 mL	0.5 mL	133422	10/19/16 15:23	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			134487	10/26/16 00:12	SBC	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

10/31/2016

Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4040	01-29-17



Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

Method

537 (modified)

Protocol References:

Laboratory References:

ct/Site: F	Former Fire Training Pit #2, Fort McCoy			
	Mothed Decemination	Dystees	l choratory	- 3
nodified)	Perfluorinated Hydrocarbons	EPA	TAL SAC	- 4
tocol Ref EPA = US	erences: Environmental Protection Agency			5
boratory R	References:			
TAL SAC	= TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (91	6)373-5600		
				8
				9

Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH Project/Site: Former Fire Training Pit #2, Fort McCoy

TestAmerica Job ID: 320-22766-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-22766-1	B-1	Water	10/13/16 14:50	10/18/16 09:40
320-22766-2	B-2	Water	10/13/16 16:20	10/18/16 09:40
320-22766-3	B-3	Water	10/13/16 15:45	10/18/16 09:40
320-22766-4	B-4	Water	10/14/16 11:20	10/18/16 09:40
320-22766-5	B-4 DUP	Water	10/14/16 11:30	10/18/16 09:40
320-22766-6	B-5	Water	10/14/16 11:00	10/18/16 09:40
320-22766-7	B-6	Water	10/14/16 10:15	10/18/16 09:40
320-22766-8	B-7	Water	10/14/16 09:15	10/18/16 09:40
320-22766-9	B-8	Water	10/14/16 09:50	10/18/16 09:40
320-22766-10	B-9	Water	10/13/16 13:50	10/18/16 09:40
320-22766-11	B-10	Water	10/13/16 13:20	10/18/16 09:40
320-22766-12	B-11	Water	10/13/16 12:00	10/18/16 09:40
320-22766-13	EQUIPMENT BLANK	Water	10/14/16 11:45	10/18/16 09:40

Client Information Client Contact Mr. Mike Rohlik Company Company Company Company Address 10 North Bridge Street Orippewa Falls State, Zp: Chippewa Falls State, Zp: Nu, 54729-3374 Phone:	Sampler the Coulde	Lab PM:	Coche Callog	Carrier Tracking No(s):	COC No.
Client Contact Mr. Mike Rohlik Company Short Elliott Hendrickson, Inc. dba SEH Address 10 North Bridge Street City State.Zip Wil. 54729-3374 Phone:	Phone 11-10		02 20 1201		320-13029-2983.1
Mr. Mike Rohlik Company Company Address 10 North Bridge Street Chippewa Falls State, Zp: Wil, 54729-3374 Phone:		E- G E-Mail:	L 110 color and		Page
Company Short Elitott Hendrickson, Inc. dba SEH Adors: 10 North Bridge Street City: City: City: State, Zp: State, Zp: Phone:		W	102 Jun 2 and 20		Page 1 of 2
Address: 10 North Bridge Street Criy: Scite, Zip: Wil, 54729-3374 Phone:			Analysis Rec	quested	
City: Chippewa Falls State, Zp: WI, 54729-3374 Phone:	Due Date Requested:				Preservation Codes:
state, Zip. Wit.6.Zip. Wit.829-3374 Phone:	TAT Requested (days):				B - NaOH N - None C - Zh Acetate O - AsNaO2
VVI, 447.23-537.4 Phone:		On	ירכע		D - Nitric Acid P - Na204S E - NaHSO4 Q - Na2SO3
	PO#	/ (5 p.		F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4
Email: mroblik@sehinc.com	#O#	a of NG	10-C/6		H - Ascorbic Acid T - TSP Dodecahydrs I - Ice U - Acetone y - J - DI Water V - MCAA
Project Name Former Fire Training Pit #2. Fort McCov	Project #:	e (人e	4H Jo se		K - EDTA W - pH 4-5 L - EDA Z - other (specify)
Site:	SSOW#:	dmag	225		of con
	Samt Typ Sample (C=co	Ne Matrix 9 (Wavater, 5 Basold TP, Owwateroll,	- 27		redmuki let
Sample Identification	Sample Date Time G=gr	ab) Bransue, Andr.) II ervation Code: X) X	THE REPORT OF A DESCRIPTION OF A	P Special Instructions/Note:
8-1	10/3/10 2150 G	Water	X		EPA Meduci 537/ma
Bi	1 00:1	Water			
B-3	✓ 3:42	Water			
B-4	U:30	Water			11.1
B-4 Dup	(1:30	Water			
. P-2	100:11 911/101	Water			
0-6	× 10:12	Water			
6-7	Individual quise	Water			
6-8	4:50	Water			
8-9	OS:1	Water		320-22766 Chain of Cust	tody
B-1D	10113110 1:20 1	Water 🤘			10
Possible Hazard Identification	Poison B Unknown Radiolo	rical	Sample Disposal (A fee may be a	assessed if samples are r	retained longer than 1 month) Archive For Months
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Reinquished by:	Date/Time	Company	Received by:	Date/Time.	Company
Custody Seals Intact Custody Seal No.:			Cooler Temperature(s) ^a C and Other Re	amarks: , , , , , , , , , , , , , , , , , , ,	4.0

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Page 25 of 29

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Sacramento	vay
TestAmerica	880 Riverside Parkv

Chain of Custody Record



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	Sampler	Lab PM		Carrier Tracking No(s)	COC No.	
Client Information				falses Russes	320-13029-2983.2	
Client Contact Mr. Mike Rohlik	Phone	E-Mail:			Page: Page 2 of 2	
Company. Short Elliott Hendrickson, Inc. dba SEH			Analysis Re	equested	Job #	
Address	Due Date Requested:				Preservation Codes:	
to notiti bringe succi (Chippewa Falls	TAT Requested (days):		Ŧ		A - HCL M - B - NaOH N - C - Zh Acetate O -	Hexane None AsNaO2
State, Zip WI 54729-3374			BYS		D - Nitric Acid P - E - NaHSO4 Q -	Na2O4S Na2SO3
Phone	PO#		19		F - MeOH R - G - Amchlor S -	Na2S2O3 H2SO4
Email. mrohlik@sehinc.com	# OM		s or No) affind	31	1 - Ascorbic Acid T - 1 1 - Ice U U	TSP Dodecahydrate Acetone MCAA
Project Name. Former Fire Training Pit #2, Fort McCoy	Project #		2 23 10 50,	enist	L-EDA Z-0	- pH 4-5 other (specify)
Site	SSOW#			01 601	Other:	
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Relinquished by:	Date/Time	Company	Received by:	DatedTime:	Cor	mpany

Page 26 of 29

10/31/2016

Custody Seals Intact: Custody Seal No... A Yes A No

1 2 3

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Cooler Temperature(s) ^aC and Other Remarks.



THE LEADER IN ENVIRONMENTAL TESTING



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Tracking #: 7843 7329 4656

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID 11 / 🙆 / AK / Other
Cooler Custody Seal:
Sample Custody Seal:
Temp: Observed
Corrected: <u>0.2°C</u>
From: Temp Blank D Sample D
NCM : Yes D No D
Yes No NA
Perchlorate has headspace?
CoC is complete w/o discrepancies?
Samples received within holding time?
Sample preservatives verified? D D D
Initial/Date: The co/18/16

L'IQAVFORMSIQA-812 REV. 1 SAMPLE RECEIVING NOTES.DOC

10/31/2016

ATTACHMENT B

STATEMENT OF WORK

Contract No. W911SA-15-D-0016

FORMER FIRE TRAINING BURN PIT #2 Fort McCoy, WI

Robert

1. GENERAL PROJECT INFORMATION

Project Name: Former Fire Training Burn Pit #2, Fort McCoy WI Work Order Number: NA

2. SCOPE OF AE SERVICES:

Provide groundwater sampling and analysis for eight perfluorinated surfactant compounds at Former Fire Training Burn Pit #2 located adjacent to the north-south runway at the Fort McCoy Airfield Figure 1. The purpose of the work is to determine if residual concentrations of perfluorinated surfactants are present in groundwater due to the former use of Aqueous Film Forming Foam (AFFF) for training in extinguishing fires at the former fire training pit.

3. PROJECT REQUIREMENTS:

General Requirements:

)
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The project requires collection of M groundwater samples, utilizing direct push technology, from the locations shown on Figure 2, at the approximate coordinates listed on Table 1 (to the nearest meter, if utilities allow). Each sample will be analyzed for the following eight perfluorinated surfactant parameters: perfluorobutanoic acid (PFBA), perfluoropentanoic acid (PFPeA), perfluorobexanoic acid (PFHxA), perfluorobeptanoic acid (PFHpA), perfluorooctanoic acid (PFOA), perfluorobutanesulfonate (PFBS), perfluorobexanesulfonate (PFHxS), and perfluorooctanesulfonate (PFOS). EPA Method 537 (md Fed)

Specific Requirements:

The contractor shall contact Diggers Hotline (800-242-8511) to have the site marked prior to conducting work.

The contractor shall coordinate all work with the Fort McCoy Airfield (Mr. James Hubbard 608-388-4207) to schedule the work on days when the north-south runway can be shutdown. The coordination shall be at least two weeks in advance of any field work.

Utilizing direct push technology, the contractor shall collect groundwater samples from the 11 locations shown on Figure 2, at the approximate coordinates shown on Table 1. In addition, the Contractor shall collect one duplicate sample from Boring 4, and one equipment blank. The duplicate and equipment blank will also be analyzed for perfluorinated surfactants. No soil samples will be collected either for boring logs or for chemical analyses. Each groundwater sample will be collected utilizing the United States Environmental Protection Agency (USEPA)

Page 1 of 4

Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Login Number: 22766 List Number: 1 Creator: Nelson, Kym D

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 320-22766-1

List Source: TestAmerica Sacramento

ATTACHMENT 2

BORING LOGS AND ABANDONMENT FORMS

BORING LOGS FTBP2 OCTOBER 2016

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SOIL BORING	LOG INFORMATION
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This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

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Watershed/Wastewater 🔲 Waste Management 🔲 Route To: Remediation/Revelopment Other Page License/Permit/Monitoring Number Boring Number Facility/Project Name Pit #2, Ft Meloy 3 Former File Training P:+ #2, F+1 Boring Drilled By: Name of crew chief (first, last) and Firm Training Date Drilling Started Date Drilling Completed Drilling Method First Name: Last Name* $\frac{1}{m}\frac{0}{m},\frac{1}{a}\frac{3}{a},\frac{2}{y}\frac{0}{y}\frac{1}{y}\frac{6}{y}$ $\frac{1}{m} \frac{\Omega}{m} / \frac{1}{d} \frac{3}{d} \frac{\Omega}{y} \frac{O}{y} / \frac{O}{y} \frac{O}{y}$ Hydrahe Fim: On-Site Ennion mental Sciuces Inc. DNR Well ID No. Surface Elevation WI Unique Well No. Well Name Final Static Water Level Borehole Diameter Feet MSL Feet MSL inches Local Grid Origin (estimated:) or Boring Location Local Grid Location D . Ħ Lat State Plane $\square N$ ΠE 11 D 1 <u>SW</u> 1/4 of <u>SW</u> 1/4 of Section 16 T17 N.R 3W Long Feet 🗖 S Feet W Facility ID County Code Civil Town/City/ or Village County Sample Soil Properties Depth in Feet (Below ground surface) Length Att. & Recovered (in) Soil/Rock Description Blow Counts Compressive Strength And Geologic Origin For RQD/ Comments Number and Type Graphic Log Well Diagram PID/FID USCS Plasticity Index Moisture Content Each Major Unit Liquid Limit P 200 youlds of Dork Brand Topsoil f J 20. mbes of Dik Brann Mediumgruin Sand З M Ŝ light Brown, medium gruinie scart (• ï 94 4 q ٩ 10 11 12 13 14 iS End of Boing at 15th I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm EL Coller

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Form 4400-122 Rev. 7-98 Route To: Watershed/Wastewater 🔲 Waste Management 🔲 Remediation/Revelopment Other Page License/Permit/Monitoring Number Facility/Project Name Boring Number Pit #2, Ft Meloy Former File Training P:+ #2, F+1 Boring Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling Completed Drilling Method First Name: Last Name; 13320Lb $\frac{1}{m}\frac{G}{m}'_{\overline{a}} - \frac{1}{a}'\frac{2}{y}\frac{O}{y}\frac{i}{y}\frac{O}{y}$ <u>j</u> <u>0</u> 0 Hydrahe Firm: On-Site Enn. unmental Services Inc. Surface Elevation DNR Well ID No. Final Static Water Level WI Unique Well No. Well Name Borehole Diameter Feet MSL Feet MSL inches Local Grid Origin D (estimated: D) Local Grid Location or Boring Location D , 11 Lat State Plane ΠN ΠE 11 D 1 <u>SW</u> 1/4 of <u>SW</u> 1/4 of Section <u>16</u> Facility ID County T17 N. R 30 Feet W l Long Feet 🗖 S Civil Town/City/ or Village County Code County Sample Soil Properties Depth in Feet (Below ground surface) £ Soil/Rock Description Blow Counts Compressive Strength RQD/ Comments And Geologic Origin For Recovered Plasticity Index Graphic Log Well Diagram PID/FID USCS Moisture Content Each Major Unit Liquid Limit P 200 14 inches Light Bran, medium grand Yinches Derk Bran, medungrouser Sand 2 Ś 1 Ight Brann medrum grained Sand \$ ė Ï Ç ٩ N 1.5 V u ið 13 14 łS End OF Boing 15th

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SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Watershed/Wastewater 🔲 Waste Management 🔲 Route To: Remediation/Revelopment 🔲 Other 🔲 Page Facility/Project Name License/Permit/Monitoring Number Boring Number Training Pit #2 Fr Mkloy Former Fire Boring Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling Completed Drilling Method First Name Last Name: $\frac{1}{m}\frac{G}{m}/\frac{1}{d}$ $\frac{3}{d}$ $\frac{1}{a}\frac{3}{a}\frac{3}{y}\frac{0}{y}\frac{1}{y}$ Oy / 6 10 <u>'</u>. Hydrahe Fim: On-Sile Environmental Sciuces Inc. mm DNR Well ID No. Surface Elevation WI Unique Well No. Well Name Final Static Water Level Borehole Diameter Feet MSL Feet MSL inches Local Grid Origin D (estimated: D) or Boring Location Local Grid Location ο . 12 State Plane Lat. N D N $\Box E$ 11 1 D 5W 1/4 of SW 1/4 of Section 16 т 17 N, R 30 Feet W Long Feet D S Facility ID Civil Town/City/ or Village County Code County Sample Soil Properties Depth in Feet (Below ground surfac સ્ટ Recovered (in) Soil/Rock Description Blow Counts Length Att. And Geologic Origin For Compressiv Strength RQD/ Comments Number and Type USCS PID/FID Plasticity Index Graphic Log Well Diagram Moisture Content Each Major Unit Liquid P 200 Zinder Dark Brum. Topsa 1 10 miles Davic Bicun, Medium grain 2 Sand 3 Ŋ light Brien, medum grainer Sund ŝ ė 7 ¢ 4 10.4 ю V 11 12 13 14 IS End OF Borng @150 I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm 6 SK 10

SOIL BORING	LOG	INFORMATION
Form 4400-122		Rev. 7-98

Watershed/Wastewater 🔲 Waste Management 🔲 Route To: Remediation/Revelopment Olher Page Facility/Project Name License/Permit/Monitoring Number Boring Number Training Pit #2 Ft Meloy Former Fire Boring Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling Completed Drilling Method First Name Last Name: $\frac{1}{m}\frac{0}{m}/\frac{1}{d}\frac{3}{d}$ 10,1 <u>, 3 0 1</u> /<u>13</u> 1र्झ् <u>⊘</u> y ĻĢ Hydraha Fim: On-Site Environmental Services IN. 1 mm WI Unique Well No. DNR Well ID No. Final Static Water Level Well Name Surface Elevation Borehole Diameter Feet MSL Feet MSL inches Local Grid Origin 🗆 (estimated: 🗆) or Boring Location Local Grid Location D . 11 State Plane N Lat ПΕ DN 11 1 D <u>SW</u> 1/4 of <u>SW</u> 1/4 of Section 16 т 17 N, R 30 Feet W Long Feet 🗖 S Facility ID County Code Civil Town/City/ or Village County Sample Soil Properties 8 Depth in Feet (Below ground surfa Recovered (in) Soil/Rock Description Compressive Strength Blow Counts Length Att. And Geologic Origin For RQD/ Comments Number and Type USCS PID/FID Plasticity Index Graphic Log Well Diagram Moisture Content Each Major Unit Liquid Limit P 200 2inder Durk Brown Top5011 light Brown, Medrum grècine 2 3 Ŋ ŝ Ġ ĩ вŧ A ę Ą 10 11 ià 13 14 ıS End of Boring @ 15ft I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Firm

SOIL BORING LOG	INFORMATION
Form 4400-122	Rev. 7-98

Route To:	Watershed/Wastewater 🔲 Waste Management 🔲
	Remediation/Revelopment 🔲 Other

													Page		of	Ĭ
Facilit	y/Proje	ect Na	me IC	Training P:+ =	#2 Fr Meloy	Licen	se/Peri	nit/Mo	onitorir	ig Nun	ıber	Borin	g Num	ber B~/(<u></u> つ	
Borin	g Drille	d By:	Nam	e of crew chief (first,	last) and Firm	Date 1	Drilling	g Starte	ed	Date I	Drilling	g Com	pleted	Drillin	g Met	hod
First Name: Last Name: First On-Sile Eng. when the Guivees Inc.							$\frac{1}{m}\frac{0}{m},\frac{1}{4}\frac{3}{4},\frac{3}{3},\frac{3}{3},\frac{1}{3},\frac{1}{3},\frac{1}{3},\frac{3}{3},\frac{3}{3},\frac{1}{3$						Rush			
WIU	nique V	Vell N	o.	DNR Well ID No.	Well Name	Final	nal Static Water Level Surface Elevation Borehole					ole Di	ameter			
Local	Grid C		—	stimated: []) or Bo			Feet MSLFeet MSL					<u> </u>	<u>√</u> i	nches		
State I	Plane _			N,	E	I	.at			20004	Ond L		I N	ΠE		
SW	1/4 of	SW	_1/4 of	Section <u>16</u> , T 1	<u>7 n, r 30</u>	Lo	Long !!					Feet \square S Feet \square W				
Facili	y ID			County	1	County C	lode	Civil	Town/	City/ o	r Villa	ge				
							a an 16 160		1							
Sam	ple		(ace)								<u> </u>	Soil	Prope	rties		
	nt. 8 1 (in	unts	E Feet	Soil/Ro	ck Description						ž					
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I herel	ov ceri	ifv th	at the	information on this I	form is true and cor	rect to the	he bes	t of m	y kno	vledg	e.		<u></u>			.

Signature Pirm SEF

SOIL BORING L	OG INFORMATION
Form 4400-122	Rev. 7-98

Watershed/Wastewater 🔲 Waste Management 🔲 Route To: Remediation/Revelopment D Other Page License/Permit/Monitoring Number Facility/Project Name Boring Number P:+ #2 F+ 1 kloy (noining) Former File Boring Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling Completed Drilling Method First Name: Last Name: 3 <u>0</u> / 6 /<u>र्</u>यु Hydra he Fim: On-Site Environmental Services Inc. DNR Well ID No. Final Static Water Level Borehole Diameter WI Unique Well No. Well Name Surface Elevation Feet MSL _Feet MSL inches Local Grid Origin (estimated:) or Boring Location " Local Grid Location D , State Plane Lat N. \square N ΠE 11 1 D T17 N, R 30 5W 1/4 of 5W 1/4 of Section 16 Long Feet□ w Feet 🗖 S Facility ID Civil Town/City/ or Village County Code County Sample Soil Properties Depth in Feet (Below ground surfac 8 Recovered (in) Soil/Rock Description Blow Counts Length Att. And Geologic Origin For Compressiv Strength RQD/ Comments Number and Type USCS PID/FID Plasticity Index Graphic Log Well Diagram Moisture Content Each Major Unit Liquid Limit P 200 Binches Darly Brown, Antregrand \$ 48 riches Derk Brein, Fine grained Sond L ŝ SĮ. \$ light Brown, Fine grainer Gond é ÿ 84 ¥ Ľ á 18 11 12 13 14 ١S Endor Boring @15fs I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Pohled Firm SEA
BOREHOLE ABANDONMENT FORMS FTBP2

OCTOBER 2016

Well / Drillhole / Borehole Filling & Sealing Report Page 1 of 2

Form 3300-005 (R 4/2015)

		Route to DNR Bureau	:				
Verification Only o	of Fill and Seal	Drinking Water		Watershed/W	/astewater	 R emedia	tion/Redevelopment
		Waste Managem	ent	Other:			
1. Well Location Inform	nation		2. Facility	/ Owner Inf	ormation		
County	WI Unique Well # of	Hicap #	Facility Name	е			
Monroe	Removed well		Fort Mc				
Latitude / Longitude (see ins	tructions) Fo	mat Code Method Code		ID of PWS)			
	N		Liconso/Porr	nit/Monitoring	#		
	w		LICENSE/FEIT	Intriviorintoring	μ π		
1/4 / 1/4 1/4	Section	Township Range E	Original Well	Owner			
or Gov't Lot #		N . W		0			
Well Street Address			Present weil	Owner			
6058 Hanger Way			Mailing Addr	ess of Preser	nt Owner		
Well City, Village or Town		Well ZIP Code					
Sparta, WI		L ot #	City of Prese	ent Owner		State	ZIP Code
Subulvision Name							
Reason for Removal from S	ervice WI Unique	Well # of Replacement Well	4. Pump, L	iner, Scree	en, Casing & Sea	aling Mater	rial
			Pump and	l piping remov	ved?	Y	'es 🗌 No 🗹 N/A
3. Filled & Sealed Well	/ Drillhole / Borel	nole Information	Liner(s) re	emoved?		Y	es No N/A
Monitoring Well	Original Const	ruction Date (mm/dd/yyyy)	Liner(s) pe	erforated?		Υ	es No N/A
		10/13/2016	Screen rei	moved?			es No N/A
	If a Well Cons	truction Report is available,		t in place?		Y	
Borehole / Drillhole	please attach.	- -	Was casir	ng cut off belo	w surface?	LΥ	es No N/A
Construction Type:		_	Did sealin	g material rise	e to surface?		
	riven (Sandpoint)	Dug	Did mater	was hole ret	24 nours?		
Other (specify): Direc	t Push		If bentonit	e chips were	used. were they hvo	drated 🖂	
Formation Type:			with water	from a know	n safe source?	Y	es No N/A
Unconsolidated Forma	tion E	Bedrock	Required Me	thod of Placir	ng Sealing Material		
Total Well Depth From Grou	ind Surface (ft.) Cas	sing Diameter (in.)		ctor Pipe-Gra	vity Conductor	Pipe-Pumpe	d
15			(Bentor	nite Chips)	Other (Exp	olain):	
Lower Drillhole Diameter (in	.) Ca:	sing Depth (ft.)	Sealing Mate	erials		_	
2.5			Neat C	ement Grout		Concrete	
Was well annular space grou	ited?	s No Unknown	Sand-C	Cement (Conc	crete) Grout	Bentonite C	Chips
If ves, to what depth (feet)?	Depth to	Water (feet)	- Por Monitorii	ng vvens and i		enoles Only:	nt Grout
··· J ••· , •• ···· •• ••• •• (••••) ·				ar Dontonito			
			Granus		No Vards Sacks	Sealant or	Mix Ratio or
5. Material Used to Fill	Well / Drillhole		From (ft.)	To (ft.)	Volume (circle	e one)	Mud Weight
3/8" Bentonite Chips			Surface	15	25#		
6 Commonte							
o. comments							

Boring	Name	- B-1
--------	------	-------

7. Supervision of Work					DNR Use Only		
Name of Person or Firm Doing Filling & Sealing	Licens	e #	Date of I	Filling & Sealing or Verification	Date Received	Noted By	
On-site Environmental Services, Inc.		(mm/dd/yyyy) 10/13/2016					
Street or Route		Telephone Number C			Comments		
PO Box 280				(608) 837-8992			
City	State	ZIP Code		Signature of Person Doing W	/ork [Date Signed	
Sun Prairie	WI	5359	0	Anthony R. Kapu	qi	11/16/2016	
)		

Well / Drillhole / Borehole Filling & Sealing Report Form 3300-005 (R 4/2015)

Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

		Ro	Route to DNR Bureau:							
Verification Only	of Fill and Se	eal	Drinking Water	E	Watershed/	Wastewater	ater			
			_ Waste Managem	ant Other:						
1. Well Location Inform	mation		Sale	2. Facility / Owner Information						
County	WI Unique Well Removed Well	# of Hica	ap#	Facility Na	me M C					
Monroe	rianorea rren			101	rt McL	-04				
Latitude / Longitude (see in	structions)	Format Cod	le Method Code	Facility ID	(FID or PWS)	1				
	N		GPS008							
			SCR002	License/Pe	ermit/Monitorin	g #				
17.142 142	W			0-1-1-1141						
741 74 74	Section	Townsh	E E	Original w	ell Owner					
or Gov't Lot #			N UW	Descont W	all Owner					
Well Street Address				Fresent w	en owner					
6058 M	meer	way		Mailing Ad	drase of Proso	nt Owner				
Well City, Village or Town	117	r v	Vell ZIP Code	Walling Act						
Sparta	WI		21.4	City of Pres	sent Owner		State	ZIP Code		
Subdivision Name		6	ot#							
Peason for Removal from S		vique Well # o	Replacement Well	4. Pump,	Liner, Scre	en, Casing &	Sealing Ma	terial		
Reason for Removal from c		ique vven # 0	r Replacement wen	Pump ar	nd piping remo	ved?		Yes No NA		
3 Filled & Sealed Well	/ Drillhole / B	orehole Info	ormation	Liner(s)	removed?		C	Yes No N/A		
	Original C	onstruction Da	ate (mm/dd/yyyy)	Liner(s)	perforated?			Yes No NA		
		hliz hr	n11	Screen r	emoved?			Yes No NA		
Water Well	IF a Wall	Construction E	110	Casing l	eft in place?		E	Yes No NA		
Borehole / Drillhole	please at	tach.	report is available,	Was cas	ing cut off belo	ow surface?	1	Yes No WNA		
Construction Type:	-			Did seali	ng material ris	e to surface?	C	Yes INO N/A		
Drilled D	riven (Sandpoint		Dug	Did mate	orial settle after	r 24 hours?		Yes No N/A		
Other (specify):	proct Pus	L		If yes	s, was hole ret	opped?		Yes No NA		
Formation Type:				If benton	ite chips were	used, were they	hydrated	Yes DNo DNA		
	llon	Bedrock		Required M	athod of Placi	na Sealing Mate	rial	Pres Class Class		
Total Wall Donth From Crow	and Surface (ft)	Cosing Diam	ator (In)	Condi	uctor Pine-Gra		ctor Pine-Pum	aped		
Total Well Depth From Grou	ind Sunace (it.)	Casing Diam	eter (m.)	Scree	ned & Poured		Containty	ipou		
15				(Bente	onite Chips)		Explain):			
Lower Drillhole Diameter (in	.)	Casing Depti	n (ft.)	Sealing Ma	terials		-			
2.5		and the second second		Neat	Cement Grout		Concrete	a		
Was well appular space grou	tod2			Sand-	Cement (Cond	crete) Grout	Bentonite	e Chips		
was wer annalar space groa				For Monitor	ing Wells and	Monitoring Well	Boreholes Oni	ly:		
If yes, to what depth (feet)?	Dept	h to Water (te	et)	Bento	nite Chips	B	entonite - Cem	nent Grout		
		_		Granu	ilar Bentonite	B	entonite - San	d Slurry		
5. Material Used to Fill	Well / Drillhol	e		From (ft.)	To (ft.)	No. Yards, Sac Volume (c	cks Sealant or ircle one)	Mix Ratio or Mud Weight		
3/8 Rentrant	e chiar	1		Surface	15	251	a			
	origina									
and the second second								A CONTRACTOR		
6. Comments	Charles and	Contraction of	and the same			10 10 10 10 10 10 10 10 10 10 10 10 10 1	a same			
Boring Name	= B-2									
7. Supervision of Work			and the second second				DNR Use	Only		
Name of Person or Firm Doi	ng Filling & Seali	ng License	# Date of Fi	lling & Sealin	g or Verificatio	n Date Receive	ad ad	Noted By		
Mike Pakl.	IE .		(mm/dd/yy	(yy) 10/14	112016	40.242		·		
Street or Route	- 1		Te	elephone Nur	nber	Comments				
10 North	Bidge S	51.	(715)27	11-1054	1.1.1	-	المسرا سري المرا		
City 1	11	State Z	IP Code	Signature of	Person Doing	Work	// Da	ate Signed		
hopeni hal	5	wi	57/24	11	and.	ante	1	11/22/2016		

Well / Drillhole / Borehole Filling & Sealing Report Page 1 of 2

Form 3300-005 (R 4/2015)

		Route to DNR Bureau	:				
Verification Only o	of Fill and Seal	Drinking Water		Watershed/W	/astewater	 R emedia	tion/Redevelopment
		Waste Managem	ent	Other:			
1. Well Location Inform	nation		2. Facility	/ Owner Inf	ormation		
County	WI Unique Well # of	Hicap #	Facility Name	е			
Monroe	Removed well		Fort Mc				
Latitude / Longitude (see ins	tructions) Fo	mat Code Method Code		ID of PWS)			
	N		Liconso/Porr	nit/Monitoring	#		
	w		LICENSE/FEIT	Intriviorintoring	μ π		
1/4 / 1/4 1/4	Section	Township Range E	Original Well	Owner			
or Gov't Lot #		N . W		0			
Well Street Address			Present weil	Owner			
6058 Hanger Way			Mailing Addr	ess of Preser	nt Owner		
Well City, Village or Town		Well ZIP Code					
Sparta, WI		L ot #	City of Prese	ent Owner		State	ZIP Code
Subulvision Name							
Reason for Removal from S	ervice WI Unique	Well # of Replacement Well	4. Pump, L	iner, Scree	en, Casing & Sea	aling Mater	rial
			Pump and	l piping remov	ved?	Y	'es 🗌 No 🗹 N/A
3. Filled & Sealed Well	/ Drillhole / Borel	nole Information	Liner(s) re	emoved?		Y	es No N/A
Monitoring Well	Original Const	ruction Date (mm/dd/yyyy)	Liner(s) pe	erforated?		Υ	es No N/A
		10/13/2016	Screen rei	moved?			
	If a Well Cons	truction Report is available,		t in place?		Y	
Borehole / Drillhole	please attach.	- -	Was casir	ng cut off belo	w surface?	LΥ	es No N/A
Construction Type:		_	Did sealin	g material rise	e to surface?		
	riven (Sandpoint)	Dug	Did mater	was hole ret	24 nours?		
Other (specify): Direc	t Push		If bentonit	e chips were	used. were they hvo	drated 🖂	
Formation Type:			with water	from a know	n safe source?	Y	es No N/A
Unconsolidated Forma	tion E	Bedrock	Required Me	thod of Placir	ng Sealing Material		
Total Well Depth From Grou	ind Surface (ft.) Cas	sing Diameter (in.)		ctor Pipe-Gra	vity Conductor	Pipe-Pumpe	d
15			(Bentor	nite Chips)	Other (Exp	olain):	
Lower Drillhole Diameter (in	.) Ca:	sing Depth (ft.)	Sealing Mate	erials		_	
2.5			Neat C	ement Grout		Concrete	
Was well annular space grou	ited?	s No Unknown	Sand-C	Cement (Conc	crete) Grout	Bentonite C	Chips
If ves, to what depth (feet)?	Depth to	Water (feet)	- Por Monitorii	ng vvens and i		enoles Only:	nt Grout
··· J ••· , •• ·····• ••• ••• (••••) ·				ar Dontonito			
			Granus		No Vards Sacks	Sealant or	Mix Ratio or
5. Material Used to Fill	Well / Drillhole		From (ft.)	To (ft.)	Volume (circle	e one)	Mud Weight
3/8" Bentonite Chips			Surface	15	25#		
6 Commonte							
o. comments							

Boring	Name -	B-3
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7. Supervision of Work					DNR Use Only		
Name of Person or Firm Doing Filling & Sealing License #			Date of I	Filling & Sealing or Verification	Date Received	Noted By	
On-site Environmental Services, Inc.			(mm/dd/	уууу) 10/13/2016			
Street or Route				Telephone Number	Comments		
PO Box 280				(608) 837-8992			
City State ZIP Code				Signature of Person Doing W	/ork D	ate Signed	
Sun Prairie	WI	5359	0	Anthony R. Kapu	qi	11/16/2016	

Well / Drillhole / Borehole Filling & Sealing Report Form 3300-005 (R 4/2015)

Page 1 of 2

			Route	to DNR Bureau	: 	Watersherd	Vastewater	Reme	/
	of Fill and	Seal		Waste Manageme	ent] Other:	latentitor		autors/redevelopiner
1. Well Location Info	rmation	2.			2. Facility	/ / Owner In	formation		
County	WI Unique We	ll # of	Hicap #	6	Facility Nar	ne			
Marche	Removed Wel	1			For	+ McC	04		
Tatiluda /Longituda (coo)	inetructions)	IFor		Mothod Code	Facility ID (FID or PWS)	1		and the second second
Landde / Longildde (see i	instructions)	M		GPS008		1.			
		N		SCR002	License/Pe	rmit/Monitoring	1#		
	12.00	w		OTH001					
YA1YA YA	Section	on	Township	Range E	Original We	ll Owner			
or Gov't Lot #	1.1.1		N	L w	Brocont Wo	I Owner			
Well Street Address	1	1.1	10		Fiesent we	in Owner			
6038 M	anger	Wa	V IMAN	3ID Cada	Mailing Add	ress of Preser	nt Owner		
Go. M	1.17		vvei	ZIP Code					
Subdivision Name	, we	-	Lot#		City of Pres	ent Owner		State	ZIP Code
Carden reality			Lor		1.1.			L	
Reason for Removal from	Service WI	Unique	Well # of Re	placement Well	4. Pump,	Liner, Scree	en, Casing & Sea	aling Mat	erial
Alter a subset work with the party of spirit					Pump an	d piping remov	/ed?		Yes No V
3. Filled & Sealed We	ll / Drillhole /	Boreh	ole Inform	nation	Liner(s) r	emoved?			Yes No No
Monitoring Well	Origina	Constru	uction Date	(mm/dd/yyyy)	Liner(s) p	erforated?			Yes No No
		Ioli	3/201	6	Screen re	emoved?			Yes No N/
Water wear	If a We	Il Const	ruction Repo	ort is available,	- Casing le	n in place?			
Borehole / Drillhole	please	attach.	SP 01 6	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	Was casi	ng cut off belo	w surface?		Yes No VN/
Construction Type:			-		Did sealin	ng material rise	to surface?		Yes No NA
	Driven (Sandpoi	nt)	Du	9	Did mater	was bolo ret	24 nours r	H	
Other (specify):	pirect Pu	54	-		If bentoni	te chips were	used, were they hvo	irated	
Formation Type:		-			with wate	r from a know	n safe source?	12	Yes No No
Unconsolidated Form	ation	B	edrock		Required Me	ethod of Placin	g Sealing Material	ALC: NO.	11 State 1 State 1
Total Well Depth From Gro	ound Surface (ft.) Casi	ng Diameter	r (in.)	Condu	ictor Pipe-Grav	ity Conductor	Pipe-Pump	ped
15					Bento	ned & Poured nite Chips)	Other (Exp	lain):	
Lower Drillhole Diameter (i	n.)	Casi	ng Depth (ft	2)	Sealing Mat	erials		1.171	
2.5		111			Neat C	Cement Grout		Concrete	
<u> </u>			-		Sand-	Cement (Conc	rete) Grout	Bentonite	Chips
Was well annular space gro	buted?	Yes	No	Unknown	For Manifori	ng Wells and I	Monitoring Well Bon	eholes Only	y:
If yes, to what depth (feet)?	7 De	pth to V	Vater (feet)		Bentor	nite Chips	Bento	nite - Cem	ent Grout
					Granu	lar Bentonite	Bento	nite - Sand	Slurry
5. Material Used to Fil	Well / Drillh	ole	a tan a		From (ft.)	To (ft.)	No. Yards. Sacks	Sealant or	Mix Ratio or Mud Weight
3/9 Pot	te chan	-			Surface	15	25#	ione)	Inder weight
Deniowi	in curps						~ ~ /		
				and the second second	10000	1.6.9			173
6. Comments	and the second second	12.			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	$a \rightarrow b$			and the second second
Boring Nors	e B-4								
7. Supervision of Wor	k	100	10000	A DECEMBER OF		500 S S		DNR Use	Only
Name of Person or Firm Do	oing Filling & Se	aling	License #	Date of Fil	ling & Sealing	or Verification	Date Received		Noted By
Mke Rahl	!/c			(mm/dd/yy	yy) 10/14	12016			
Street or Route	~ 1	-	-	Te	lephone Num	nber	Comments	-	
10 North	Bidge	51.		(715)27	1-1054			
City	11	Sta	Ite ZIP (Code	Signature of	Person Doing	Work	Dat	e Signed
hopeni ta	115	10	2 5	1/049	11	the .	and		1122-12016

Well / Drillhole / Borehole Filling & Sealing Report Form 3300-005 (R 4/2015)

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	(Fill and Q	Ro	Drinking Water	iu:	₩atershed∧	Wastewater	Reme	- diation/Redevelopment			
	of Fill and Se		Waste Manager	ment	ent Other:						
1. Well Location Info	rmation		Mary Street Street	2. Facility	v / Owner In	formation		State and a			
County	WI Unique Well	# of Hic:	ap#	Facility Nar	me	and and a second se					
Marcone	Removed Well			For	Fort McCoy						
1 Ionroc		Tramet Car	In Mathed Cada	Facility ID ((FID or PWS)	1					
Latitude / Longitude (see i	instructions)	Format Cot	GPS008	1.000							
	N		SCR002	License/Pe	rmit/Monitoring	g#					
	W			14 1000							
1/11/4 1/4	Section	Townsh	ip Range E	Original We	ell Owner						
or Gov't Lot #	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.	N DY	N				Street and the street of			
Well Street Address	/		1	Present We	ell Owner						
6058 H	langer	Way	Sandra Garran	64-10 A.J.	lanan af Danan	10					
Well City, Village or Town	. 17	/ /	Vell ZIP Code	Ivialling Add	iress of Prese	nt Owner					
_ Sparta	WL	10		City of Pros	ent Owner		State	ZIP Code			
Subdivision Name		L	.ot#	City of Pres	Sent Owner		State	ZIF COUB			
Passage for Demount from	Candoa MARIL	nieuro 10/oli 44 o	E Deplesement 14/a	4. Pump.	Liner, Scree	en, Casing & Se	aling Mat	erial			
Reason for Removal from	Service WI UI	nque vven # o	r Replacement we	Pump an	d piping remo	ved?		Yes No NA			
3 Filled & Sealed We	II / Drillhole / B	orehole Inf	ormation	Liner(s) r	removed?			Yes No N/A			
J. Tilled & Sealed We	Original C	Construction D	ate (mm/dd/yyyy)	Liner(s)	perforated?			Yes No No			
Monitoring Well		LIZM.	511	Screen r	emoved?			Yes No NA			
Water Well		0113/00	116	Casing le	aft in place?			Yes No NA			
Borehole / Drillhole	If a Well please at	Construction F lach.	Report is available,	Was casi	ing cut off belo	w surface?		Yes No VNA			
Construction Type:	1000 000 000 000	and a second		Did seali	ng material ris	e to surface?	Ē	Yes UNO NA			
Drilled	Driven (Sandpoint		Dug	Did mate	rial settle after	24 hours?		Yes No N/A			
Other (specify)	Direct Pus	L		If yes	s, was hole ret	opped?		Yes No NA			
Formation Type:				If benton	ite chips were	used, were they hy	drated				
Unaconsolidated Form	ation	Bedroek		Required M	othod of Plack	n sale source/	Led				
Total Wall Danth From Crit	aund Surface (B)	Cosing Diam	inten fin b	Condi	ictor Pine-Gra	vity Conducto	Pine-Pum	and			
Total Well Depth From Gro	bund Sunace (n.)	Casing Dian	later (m.)	Scree	ned & Poured		ntala lu				
15				(Bento	onite Chips)		plain):				
Lower Drillhole Diameter (i	in.)	Casing Dept	h (ft.)	Sealing Mat	terials	-					
2.5				Neat	Cement Grout		Concrete				
Was well annular space orc	outed?	Yes 🗍		Sand-	Cement (Cond	rete) Grout	Bentonite	Chips			
Ware land at death Ware				For Monifor	ing Wells and	Monitoring Well Bo	reholes Only	<i>I</i> :			
If yes, to what depth (reet)	r Dep	in to water (re	et)	Benton	nite Chips	Bent	onite - Ceme	ent Grout			
	the second second			Granu	lar Bentonite	Bent	onite - Sand	Slurry			
5. Material Used to Fil	II Well / Drillhol	e		From (ft.)	To (ft.)	No. Yards, Sacks Volume (circl	Sealant or e one)	Mix Ratio or Mud Weight			
3/8 Restrain	te chine			Surface	15	25#	and a constant of the second se				
June ganda						1. T					
				-	1 2 - 2 1			1			
6. Comments						1997					
Boring Nom	e B-5										
7. Supervision of Wor	k						DNR Use	Only			
Name of Person or Firm Do	oing Filling & Seali	ng License	# Date of I	Filling & Sealing	g or Verificatio	n Date Received	1	Noted By			
Mike Rohi	like		(mm/dd/	yyyy) 10/19	112016			I A STATE			
Street or Route	. 1	-0		Telephone Nun	nber	Comments					
10 Porth	Bidge "	51.		(715) 27	11-1054			the second second			
City	-11	State 2	IP Code	Signature of	Person Doing	Work	Dat	e Signed			
hopeny to	115	ant	57729	11	all.	and	- I ()	11/22/2016			

Well / Drillhole / Borehole Filling & Sealing Report Form 3300-005 (R 4/2015)

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_		Ro	ute to DNR Bureau	:	T 10/-1		1	/ ////////////////////////////////////
Verification Only	of Fill and So	eal	Waste Managem	ent	Other:	istewater	Remed	alation/Redevelopment
1 Well Location Infor	mation			2 Eacility	/ Owner Info	rmation		10 m m m m m m m m m m m m m m m m m m m
County	WI Unique Well	# of Hica	ap#	Facility Nar	ne	mation	0. 10x 0. mr.	
10	Removed Well	n et para		For	+ Mc.Co	14		
Plannoe				Facility ID (FID or PWS)	1		
Latitude / Longitude (see in	nstructions)	Format Cod	e Method Code					
	N			License/Pe	rmit/Monitoring #	t.		
the second second	N		OTHO01					
1/4/1/4 1/4	Section	Townshi	p Range F	Original We	I Owner			
or Gov't Lot #			N HW					
Well Street Address		_	и це	Present We	II Owner			
6058 H	anarc	Way						
Well City, Village or Town	anger .	IN IN	Vell ZIP Code	Mailing Add	ress of Present	Owner		
Spatta	WIT		and the second					
Subdivision Name	, 02-	L	ot#	City of Pres	ent Owner		State	ZIP Code
						a state		
Reason for Removal from	Service WI U	nique Well # of	Replacement Well	4. Pump,	Liner, Screen	, Casing & Sea	aling Mate	erial
	A. C			Pump an	d piping remove	d?		Yes No NA
3. Filled & Sealed Wel	ll / Drillhole / B	orehole Info	ormation	Liner(s) r	emoved?			
Monitoring Well	Original C	construction Da	ate (mm/dd/yyyy)	Liner(s) p	perforated?			Yes No NA
		0/13/20	016	Screen re	moved?		님	Yes No NA
	If a Well	Construction R	leport is available,	- Casing le	n in place?			Yes No UNA
Borehole / Drillhole	please at	tach.		Was casi	ng cut off below	surface?		Yes No VN/A
Construction Type:				Did sealir	ng material rise t	o surface?		Yes WNo N/A
Drilled D	Driven (Sandpoint		Dug	Did mater	rial settle after 24	4 hours?		Yes No N/A
Other (specify):	Direct Pus	6	Contraction of the	If yes	, was hole retop	ped?	. Ц	Yes No NA
Formation Type:				with wate	te chips were us r from a known s	ed, were they hyd safe source?	rated	Yes No NA
Unconsolidated Form	ation	Bedrock		Required M	thod of Placing	Sealing Material		
Total Well Depth From Gro	und Surface (ft.)	Casing Diam	eter (in.)	Condu	ctor Pipe-Gravit	y Conductor	Pipe-Pump	bed
15				Screen	ned & Poured	Other (Exp	lain):	
Lower Drillholo Diameter (i	-1	Carina Donth	(#)	Cooling Mat	nite Chips)			
	1./	Casing Depu	i (it.)	Nost C	Compart Grout	E	Concrete	
2.5							Denterete	Obles
Was well annular space gro	uted?	Yes II	No Unknown	Sand-	Sement (Concre	te) Grout	Bentonite	Chips
If yes to what donth (feat)?	Dep	h to Water (fee	at)	For Monitori	ng Wells and Mo	nitoring Well Bore	sholes Only	
in yea, to what depin (reet)?	Dep	it to water (ie)		Bentor	nite Chips	Bento	nite - Ceme	ent Grout
	Statements of Street			Granu	ar Bentonite	Bento	nite - Sand	Slurry
5. Material Used to Fill	Well / Drillhol	e		From (ft.)	To (ft.)	Volume (circle	sealant or one)	Mix Ratio or Mud Weight
3/8 Rentant	e drips			Surface	15	25户		
The second second								
6. Comments		BALL AND		26330				and the second second
Boring Maron	e B-6	1						
7. Supervision of Work	K	Contractor	5				ONR Use	Only
Name of Person or Firm Do	ing Filling & Seali	ng License	# Date of Fil	ling & Sealing	or Verification	Date Received	1	Noted By
Mike Rohl.	le		(mm/dd/yy	yy) 10/14	12016	And a second second		
Street or Route	- 1	-	Te	elephone Num	ber	Comments		
10 North	Bidge "	51.	(75127	1-1054	1	572	
City 1	-11	State Z	IP Code	Signature of	Person Doing W	ork 11	Date	e Signed
hopeni La	115	ar	57729	11	the 4	what		11/22-12016

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-		Ro	Drinking Water	#: 	1 watershade	Mantautan	1 Damadiat	ion (Bedaus language)				
Verification Only	/ of Fill and So	eal	Waste Managem	ient	Other:	vastewater	- Kemedian	Ion/Redevelopment				
1. Well Location Info	rmation	The second second	and the second second	2. Facility / Owner Information								
County	WI Unique Well	# of Hice	ap#	Facility Nar	ne	Part Charles and						
Monroe	Removed Well			For	+ McC	04						
Latitude / Longitude (see	instructions)	Format Cod	le Method Code	Facility ID (FID or PWS)								
	N		GPS008	License/Permit/Monitoring #								
	N		OTHO01									
14/14 14	Section	Townshi	ip Range E	Original We	ll Owner							
or Gov't Lot #			N DW	1								
Well Street Address	lanser	Way		Present We	ll Owner							
Well City, Village or Town	117	V	Vell ZIP Code	Mailing Add	ress of Preser	nt Owner						
Subdivision Name	, WI		ot#	City of Pres	ent Owner		State Z	IP Code				
oubdivision nume		-	or tr	(Carrie		1.1.1.1.1						
Reason for Removal from	Service WI U	nique Well # al	f Replacement Well	4. Pump,	Liner, Scree	en, Casing & Sea	aling Materia	al				
				Pump an	d piping remov	Ved?	L Ye					
3. Filled & Sealed We	II / Drillhole / B	orehole info	ormation	Liner(s)	erforated?							
Monitoring Well	Original C		ate (mm/dd/yyyy)	Screen re	moved?		TYe	S NO MANA				
Water Well	1	0113120	016	_ Casing le	ft in place?		Ye	S NO LINA				
Borehole / Drillhole	If a Well	Construction F	Report is available,	Was casi	ng cut off belo	w surface?	TYe	S NO VINA				
Construction Type:	pro-sec in			Did sealin	ng material rise	e to surface?	Ye	s LINO N/A				
Drilled	Driven (Sandpoint Direct Pus		Dug	Did mate If yes	rial settle after , was hole reto	24 hours? opped?	☐ Yes ☐ Yes	s Ino N/A s No In/A				
Formation Type:				with wate	r from a known	used, were they hyd n safe source?	rated We	s No N/A				
Unconsolidated Form	ation	Bedrock		Required M	athod of Placin	ng Sealing Material						
Total Well Depth From Gro	ound Surface (ft.)	Casing Diam	eter (in.)	Conductor Pipe-Gravity Conductor Pipe-Pumped								
Lower Drillhole Diameter (i	in.)	Casing Dept	h (ft.)	Sealing Mat	erials Cement Grout		Concrete	1000				
Was well annular space gro	outed?	Yes 🗍	No 🗍 Unknown	Sand-	Cement (Conc	rete) Grout	Bentonite Ch	ilps				
If yes, to what denth (feet)	7 IDen	th to Water (fe	et)	For Monitori	ng Wells and I	Wonitoring Well Bore	noles Only:	Crowt				
in yes, to what depart (reet)	, Dep	anto vidioi (io	ut)	Granu	inte Chips	Bento	nite - Cement	Grout				
		1	A R. C. Status and St. B.	Granu	al Bentonite	No. Yards. Sacks S	Sealant or	Mix Ratio or				
5. Material Used to Fil	ii well / Drillhol	e		From (ft.)	⊤o (ft.)	Volume (circle	one)	Mud Weight				
3/8 Benton	te chips			Surface	15	257						
A CONTRACTOR		-			-							
6. Comments				Acres								
Boring Norn	e B-	7										
7. Supervision of Wor	k	C. Adams	Section of the section of the	and the second second	and the second second	E	ONR Use Or	ily				
Name of Person or Firm Do	oing Filling & Seali	ng License	# Date of F (mm/dd/y	illing & Sealing yyy) /0/19	or Verification	Date Received	Not	ed By				
Street or Route	01.		Ţ	elephone Num	ber	Comments						
City i	Brage .	State 12	IR Code	NO / OL/	Percen Dain	Work	/ IData 0	Igned				
Clippenn La	115	wit	54729	oignature of	and boing	Toll	11	122/2016				

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	ion Only	of Fill a	nd Sea	al	Route	to DNR Bureau Drinking Water	Ē	Watershed/	Wastewater	4 Reme	- diation/Redev	elopment		
Verification only of the and occur Waste Manage Waste Manage							nent Other:							
1. Well Loca	tion Info	rmation		1.0	ALT A		2. Facility / Owner Information							
County		WI Unique	e Well #	of	Hicap #	+	Facility Name							
Manne		Removed	wen		100		Fort McLoy							
Latitude / Long	itude (see	instructions		Forma	Code	Method Code	_Facility ID (FID or PWS) /							
Carl Section 1992			N		DD	GPS008	Linear a Parasili Manifesian H							
			101		DDM	SCR002	License/Permit/Monitoring #							
14.114	112	19	Section	To	vnshin	Range D.	Original We	Il Owner						
at Cault Lat #	14		Jection	10.	memp		original we	al owner						
Wall Street Ade	lunne			1	N		Present We							
GOS!	Q 1	lancar	2 1	ilar			1- 225							
Well City, Villag	e or Town	unger		nay	Well	ZIP Code	Mailing Add	ress of Prese	nt Owner					
50	adda	112	T			1990 - 1992 C	C.C.							
Subdivision Nat	me	, w.	-		Lot #	¥	City of Pres	ent Owner		State	ZIP Code	-		
					1 21		-					-		
Reason for Ren	noval from	Service	WI Uni	ique Wø	# of R	eplacement Well	4. Pump,	Liner, Scre	en, Casing & S	Sealing Mat	terial	- Aug		
Contractor in	_		1.1				Fump an	a piping remo	ved /	-		N/A		
3. Filled & Se	ealed We	ell / Drillho	ole / Bo	orehole	Inform	nation	Liner(s)	enforated?		-				
Monitoring	g Well	On	ginal Co	Instruction	on Date	(mm/dd/yyyy)	Screen r	emoved?			Yes No	N/A		
Water We	all	_	10	1/3	1201	6	Casing le	ft in place?		Ē	Yes No	L N/A		
Borehole	/ Drillhole	lfa	a Well C	onstruct	ion Rep	ort is available,	Was casi	na cut off bela	ow surface?	Ē	Yes No			
Construction Ty	/pe:	[pic	age an	4011.			Did sealing	ng material ris	e to surface?	F	Yes WNo	N/A		
Drilled	П	Driven (Sar	(triood			a	Did mate	rial settle afte	r 24 hours?		Yes UNO	N/A		
Other (spi	ecify):	Direct	Pust		ц		If yes	, was hole rel	topped?	E	Yes No	L N/A		
Formation Type	· ·			-	-		If bentoni	te chips were	used, were they	hydrated	Ves DNo			
L Unconcoli	dated Form	nation	F	Bada	ack		Required M	ethod of Placi	no Seeling Meter		<u>,, (),-</u>			
Total Well Dent	h From Gr	ound Surfac	(ft)	Casing	Diamete	or (in)	Condu	ctor Pipe-Gra	vity Conduc	tor Pipe-Pum	ped			
Total Well Dept	15	ound ounde	- (iii)	Cushig	Diamoto		Scree	ned & Poured	Other (i	Evolain):				
Lower Drillhole	1 Diamatar/	(in)		Cosing	Donth /f	+ 1	Bento Sealing Mat	onite Chips)						
Lower Drimole		(mr)	-	Gasing	Debru (i)	Neat (enais Cement Grout						
c	1.2	1			-		Sand-	Cement /Con	crete) Grout	Bentonit	Chine			
Was well annula	ar space gr	outed?		Yes	No	Unknown	For Monifor	ing Wells and	Monitoring Mell F	Boreholes On	be an			
If yes, to what d	lepth (feet))?	Depth	to Wat	er (feet)		Bento	nite Chips		ntonite - Cerr	nent Grout			
							Granu	lar Bentonite	Пве	ntonite - San	d Slurry			
E Matarial II	cod to Fi		rillhold				Erom (#1)	Tolas	No. Yards, Sac	ks Sealant or	Mix Rat	lo or		
J. Wateriar U			minole				Surface	10(11.)	Volume (ci	rcle one)	Mud We	eight		
218	senton	te cl	rips	-			Surface	B	257					
	-		-				-							
6. Comments	6								A	-				
Bring	Nam	e F	2-8				_					_		
7 Supervisio	n of Wo		, ,			-				DMP Her	Only			
Name of Persor	or Firm D	oing Filling	& Sealin	g Lic	ense #	Date of Fi	lling & Sealin	g or Verificatio	on Date Receive	d	Noted By			
Mile	P.L.	1.1c				(mm/dd/y	(YY) 10/10	1/2016						
Street or Route			-	0	-	Т	elephone Nur	nber	Comments		-			
10 1	bith	Bida	e 5	51.		(715)27	11-1054			1			
City	1	-11		State	ZIP	Code	Signature of	Person Doin	g-Work	De De	te Signed	land		
Lipper	in to	115		w	- 13	7124	11	the	Carlo	7	1122	12016		

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		Route to DNR Bureau	:							
Verification Only of	of Fill and Seal	Drinking Water	<u> </u>	Natershed/Wa	astewater	🗹 Remedia	tion/Redevelopment			
		Waste Manageme	ent 🗌 C	Other:						
1. Well Location Inform	nation		2. Facility /	Owner Info	ormation					
County	WI Unique Well # of	Hicap #	Facility Name	•						
Monroe	Removed vveli		Fort McCoy							
Latitude / Longitude (see ins	structions) Fo	mat Code Method Code	-Facility ID (FI	D or PWS)						
Ū (Ň	DD GPS008		:+/N / :+ - +:	4					
	w	□ SCR002 □ DDM □ OTH001	License/Perm	iit/wonitoring :	#					
1/4 / 1/4 1/4	Section	Township Range E	Original Well	Owner						
or Gov't Lot #		N . W	Descentiate	0						
Well Street Address			Present vveli	Owner						
6058 Hanger Way			Mailing Addre	es of Present	Owner					
Well City, Village or Town		Well ZIP Code			Owner					
Sparta, WI		1 - 1 - 4	City of Preser	nt Owner		State	ZIP Code			
Subdivision Name		LOT #								
Reason for Removal from S	ervice WI Unique	Well # of Replacement Well	4. Pump, Li	iner, Scree	n, Casing & Sea	ling Mater	ial			
			Pump and	piping remove	ed?	Y	es 🗌 No 🗹 N/A			
3. Filled & Sealed Well	/ Drillhole / Borel	nole Information	Liner(s) rer	moved?		Y	es 🗌 No 🗹 N/A			
	Original Const	ruction Date (mm/dd/yyyy)	Liner(s) pe	rforated?		<u> </u>	es 🗌 No 🗹 N/A			
		10/13/2016	Screen rem	noved?		L Y	es No N/A			
	If a Well Cons	truction Report is available	Casing left	in place?		Y	es No N/A			
Borehole / Drillhole	please attach.		Was casing	g cut off below	v surface?	Y	es 🗌 No 🗹 N/A			
Construction Type:			Did sealing	material rise	to surface?	Y	es No N/A			
Drilled	riven (Sandpoint)	Dug	Did materia	al settle after 2	24 hours?	Υ	es 🖌 No 🗌 N/A			
Other (specify): Direc	t Push		If yes,	was hole reto	pped?	Y L	es No 🛛 N/A			
Formation Type:			with water	from a known	safe source?		es 🗌 No 🗌 N/A			
Unconsolidated Forma	tion E	Bedrock	Required Met	hod of Placing	g Sealing Material					
Total Well Depth From Grou	Ind Surface (ft.) Cas	sing Diameter (in.)	Conduc	tor Pipe-Grav	ity Conductor	Pipe-Pumpe	d			
15			Screene (Benton	ed & Poured ite Chips)	Other (Exp	lain):				
Lower Drillhole Diameter (in	.) Cas	sing Depth (ft.)	Sealing Mater	rials						
2.5			Neat Ce	ement Grout		Concrete				
Was well annular space grou	ited?	s 🗌 No 🗌 Unknown	Sand-C	ement (Concr	rete) Grout	Bentonite C	hips			
If ves, to what depth (feet)?	Depth to	Water (feet)	For Monitoring	g Wells and N	Ionitoring Well Bore	noles Only:	at Crout			
	Deptillo		Bentonin	te Chips		nite - Cemer				
			Granula	ir Bentonite	Bento	nite - Sand S	Slurry			
5. Material Used to Fill	Well / Drillhole		From (ft.)	To (ft.)	Volume (circle	one)	Mud Weight			
3/8" Bentonite Chips			Surface	15	30#					
6.0										
6. Comments										

7. Supervision of Work		DNR Use Only				
Name of Person or Firm Doing Filling & Sealing License # D			Date of F	Filling & Sealing or Verification	Date Received	Noted By
On-site Environmental Services, Inc.			(mm/dd/	уууу) 10/13/2016		
Street or Route			-	Telephone Number	Comments	·
PO Box 280 (608) 837-8992				(608) 837-8992		
City	State	ZIP Code		Signature of Person Doing V	/ork D	ate Signed
Sun Prairie	WI	5359	0	Anthony R. Kapu	Anthony R. Kapugi	
)	

Well / Drillhole / Borehole Filling & Sealing Report Page 1 of 2

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Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

			Route	to DNR Bureau:									
Verification Only of	of Fill and	Seal		Drinking Water		Watershed/W	Vastewater	Remedia	ation/Redevelopment				
,			v	Vaste Managemer	nt 🗌	Other:							
1. Well Location Inform	nation				2. Facility	/ Owner Int	formation						
County	WI Unique W	/ell # of	Hicap #		Facility Nam	е							
Monroe	Removed we	ell			Fort McCoy								
Latitude / Longitude (see in:	structions)	Fori	mat Code	Method Code		1D 01 PWS)							
		N [DD	GPS008	Liconco/Dor	mit/Monitoring	. #						
		_w	DDM										
1/4 / 1/4 1/4	Sec	tion	Township	Range E	Original Wel	I Owner							
or Gov't Lot #			N	w 🗌									
Well Street Address				•	Present Wel	I Owner							
6058 Hanger Way					Mailing Addr	one of Broom	at Owner						
Well City, Village or Town Well ZIP Code													
Sparta, WI				,	City of Prese	ent Owner		State	ZIP Code				
Subdivision Name			Lot #	£									
Passon for Pomoval from S		/I Unique V	Woll # of Pr	placement Well	4. Pump. I	_iner. Scree	en. Casing & Sea	ling Mate	rial				
Reason for Removal from C		Onque			Pump and	d piping remov	ved?	<u>ا ا</u>	res No 🔨 N/A				
3 Filled & Sealed Well	/ Drillhole	/ Boreh	ole Inforn	nation	Liner(s) re	emoved?		ר 🗌 א	res No N/A				
	Origin	al Constru	uction Date	(mm/dd/yyyy)	Liner(s) p	erforated?		ץ 🗌 א	res 🗌 No 🗹 N/A				
		1	0/13/2016		Screen re	moved?		א 🗌 א	res No N/A				
Water Well	lf a W	lell Const	ruction Ren	ort is available	Casing lef	′es No ✔N/A							
Borehole / Drillhole	pleas	e attach.			Was casir	ng cut off belo	w surface?	ץ 🗌 א	res 🗌 No 🗹 N/A				
Construction Type:					Did sealin	g material ris	e to surface?	ץ 🗌 א	res 🗹 No 🗌 N/A				
Drilled D	riven (Sandp	oint)	Du	g	Did mater	ial settle after	24 hours?	י 🗌 א	res No N/A				
Other (specify): Direct	ct Push				If yes,	, was hole ret	opped?	۲ <u>ا</u> ا	′es ∐No ✔N/A				
Formation Type:					with water	e chips were r from a know	n safe source?	rated 🗹	res No N/A				
Unconsolidated Forma	ation	B	edrock		Required Me	ethod of Placi	ng Sealing Material						
Total Well Depth From Grou	und Surface (ft.) Casi	ing Diamete	er (in.)	Condu	ctor Pipe-Gra	vity Conductor	Pipe-Pumpe	ed				
16			-		Screer (Bento	ned & Poured nite Chips)	Other (Exp	lain):					
Lower Drillhole Diameter (in	ı.)	Casi	ing Depth (f	t.)	Sealing Mate	erials							
2.5					Neat C	ement Grout		Concrete					
					Sand-C	Cement (Cond	crete) Grout	Bentonite	Chips				
Was well annular space grou	uted?	Yes		Unknown	For Monitorii	ng Wells and	Monitoring Well Bore	holes Only:					
If yes, to what depth (feet)?	l	Depth to V	Vater (feet)		Bentor	nite Chips	Bento	nite - Ceme	nt Grout				
					Granul	ar Bentonite	Bento	nite - Sand	Slurry				
5. Material Used to Fill	Well / Dril	lhole			From (ft.)	To (ft.)	No. Yards, Sacks S Volume (circle	Sealant or	Mix Ratio or Mud Weight				
3/8" Bentonite Chips					Surface	16	30#						
6. Comments													

Boring Name - B-10

7. Supervision of Work								
Name of Person or Firm Doing Filling & Sealing License #			Filling 8	& Sealing or Verification	Date Received	Noted By		
		(mm/dd/y	уууу)	10/13/2016				
			Telepho	one Number	Comments			
			(608) 837-8992				
state	ZIP Code		Signature of Person Doing W		Work	Date Signed		
WI	5359	0		Anthony R. Kap	ugi	11/16/2016		
	Licens State WI	License # State ZIP Code WI 5359	License # Date of F (mm/dd/) State ZIP Code WI 53590	License # Date of Filling & (mm/dd/yyyy) Telephi (608 State ZIP Code Sign WI 53590	License # Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/13/2016 Telephone Number (608) 837-8992 State ZIP Code Signature of Person Doing V WI 53590 Anthony R. Kap	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/13/2016 Date Received License # Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/13/2016 Date Received Telephone Number Comments (608) 837-8992 Comments State ZIP Code Signature of Person Doing Work WI 53590 Anthony R. Kapugi		

Well / Drillhole / Borehole Filling & Sealing Report Page 1 of 2

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

		Route to DNR Bureau:	1							
Verification Only	of Fill and Seal	Drinking Water		Watershed/V	Vastewater	Remediation/Redevelop	pment			
		Waste Manageme	ent	Other:						
1. Well Location Inform	nation		2. Facility	/ Owner Int	formation					
County	WI Unique Well # of	Hicap #	Facility Nam	е						
Monroe	Removed well									
Latitude / Longitude (see in	structions) Form	at Code Method Code	-Facility ID (F	D or PWS)						
	N]DD GPS008	Liconso/Por	mit/Monitoring	. #					
	w				<i>π</i>					
1/4 / 1/4 1/4	Section To	ownship Range E	Original Wel	I Owner						
or Gov't Lot #		N 🗌 W								
Well Street Address	· · ·		Present Wel	I Owner						
6058 Hanger Way			Mailing Adds	and of Drago	at Owner					
Well City, Village or Town Well ZIP Code				ess of Preser	it Owner					
Sparta, WI			City of Prese	ent Owner		State ZIP Code				
Subdivision Name		Lot #								
Dessen for Domoval from 6		(all # of Doplocoment Wall	4. Pump. I	_iner. Scre	en. Casing & Sea	ling Material				
Reason for Removal from a			Pump and	d piping remo	ved?	Yes No	N/A			
3 Filled & Sealed Well	 / Drillbole / Borebo	le Information	Liner(s) re	emoved?		Yes No	N/A			
	Original Construct	ction Date (mm/dd/yyyy)	Liner(s) p	erforated?		Yes 🗌 No 🖣	N/A			
	10	/13/2016	Screen re	moved?		🗌 Yes 🗌 No 🖣	N/A			
Water Well			Casing let	ft in place?		Yes No 🖣	N/A			
Sorehole / Drillhole	please attach.	iction Report is available,	Was casir	ng cut off belo	ow surface?	Yes No	N/A			
Construction Type:			Did sealin	g material ris	e to surface?	Yes 🗹 No 🗌	N/A			
Drilled	riven (Sandpoint)	Dug	Did mater	ial settle after	24 hours?	🗌 Yes 🗹 No 🗌]N/A			
Other (specify): Dire	ct Push	<u> </u>	If yes	, was hole ret	opped?	Yes No	N/A			
Formation Type:			If bentonit with water	te chips were r from a know	used, were they hyden n safe source?	°ated ✔Yes No [N/A			
Unconsolidated Forma	ation Bed	drock	Required Me	ethod of Placi	ng Sealing Material					
Total Well Depth From Gro	und Surface (ft.) Casin	g Diameter (in.)	Condu	ctor Pipe-Gra	ivity Conductor	Pipe-Pumped				
15			Screer (Bento	ned & Poured	Other (Exp	ain):				
Lower Drillhole Diameter (ir	n.) Casin	g Depth (ft.)	Sealing Mate	erials						
2.5			Neat C	ement Grout		Concrete				
			Sand-0	Cement (Cond	crete) Grout	Bentonite Chips				
Was well annular space gro	uted?	No Unknown	For Monitori	ng Wells and	Monitoring Well Bore	holes Only:				
If yes, to what depth (feet)?	Depth to W	ater (feet)	Bentor	nite Chips	Bento	nite - Cement Grout				
			Granul	ar Bentonite	Bento	nite - Sand Slurry				
5. Material Used to Fill	Well / Drillhole		From (ft.)	To (ft.)	No. Yards, Sacks S Volume (circle	ealant or Mix Ratio (one) Mud Weig	or ht			
3/8" Bentonite Chips			Surface	15	25#					
6. Comments										

Boring Name - B-11

7. Supervision of Work		DNR Use Only					
Name of Person or Firm Doing Filling & Sealing	ing License # Date of Filling			Filling &	& Sealing or Verification	Date Received	Noted By
On-site Environmental Services, Inc.			(mm/dd/y	уууу)	10/13/2016		
Street or Route	•		. 1	Feleph	one Number	Comments	
PO Box 280 (608) 837-8992					3) 837-8992		
City	State	ZIP Code		Signature of Person Doing W		/ork [Date Signed
Sun Prairie	WI	5359	0		Anthony R. Kapu	qi	11/16/2016
)	

ATTACHMENT 3

WATER TABLE MAPS





L-11462

ATTACHMENT 4 ANALYTICAL RESULTS FOR POTABLE WELLS AT THE FORT MCCOY AIRFIELD

PFC RESULTS FOR FORT MCCOY POTBALE WELLS SAMPLE 5020 IS THE WELL NORTH OF FTBP3

ANALYTICAL REPORT WDNR Laboratory ID No. 721026460 NORTHERN LAKE SERVICE. INC. **Analytical Laboratory and Environmental Services** WDATCP Laboratory Certification No. 105-330 400 North Lake Avenue - Crandon, WI 54520 EPA Laboratory ID No. WI00034 Ph: (715)-478-2777 Fax: (715)-478-3060 Printed: 11/23/16 Page 1 of 2 U S Army - EMECO (Fort McCoy) Client: **NLS Project:** 270910 Attn: Mike Miller **NLS Customer:** 35655 2171 South 8th Avenue 2IMNW-MCY-SSP-E Fax: 608 388 3136 Phone: 608 388 6546 Fort McCoy, WI 54656 Project: Drinking Water - Method 537 5020 NLS ID: 958672 COC: 196187:1 Matrix: DW Collected: 11/09/16 13:00 Received: 11/11/16 Parameter Result Units Dilution LOD LOQ/MCL Analvzed Method Lab Perfluorinated Chemicals by EPA Method 537 Rev 1.1 11/22/16 EPA 537 Rev 1.1 721026460 see attached Solid Phase Extraction by EPA Method 537 11/17/16 EPA 537 721026460 ves 5021 NLS ID: 958673 COC: 196187:2 Matrix: DW Collected: 11/09/16 13:15 Received: 11/11/16 Units Dilution LOD LOQ/MCL Analyzed Method Lab Parameter Result Perfluorinated Chemicals by EPA Method 537 Rev 1.1 11/22/16 EPA 537 Rev 1.1 721026460 see attached Solid Phase Extraction by EPA Method 537 11/17/16 EPA 537 721026460 yes 5024 NLS ID: 958674 COC: 196187:3 Matrix: DW Collected: 11/09/16 10:30 Received: 11/11/16 Parameter Result Units Dilution LOD LOQ/MCL Analyzed Method Lab Perfluorinated Chemicals by EPA Method 537 Rev 1.1 EPA 537 Rev 1.1 721026460 11/22/16 see attached Solid Phase Extraction by EPA Method 537 yes 11/17/16 EPA 537 721026460 5025 NLS ID: 958675 COC: 196187:4 Matrix: DW Collected: 11/09/16 10:15 Received: 11/11/16 Result Units Dilution LOD LOQ/MCL Analvzed Method Lab Parameter Perfluorinated Chemicals by EPA Method 537 Rev 1.1 11/22/16 EPA 537 Rev 1.1 721026460 see attached Solid Phase Extraction by EPA Method 537 11/17/16 EPA 537 721026460 yes 5026 NLS ID: 958676 COC: 196187:5 Matrix: DW Collected: 11/09/16 13:15 Received: 11/11/16 LOQ/MCL Parameter Result Units Dilution LOD Analyzed Method Lab Perfluorinated Chemicals by EPA Method 537 Rev 1.1 see attached 11/22/16 EPA 537 Rev 1.1 721026460 Solid Phase Extraction by EPA Method 537 11/17/16 yes EPA 537 721026460 5027 NLS ID: 958677 COC: 196187:6 Matrix: DW Collected: 11/09/16 10:15 Received: 11/11/16 Parameter Result Units Dilution LOD LOQ/MCL Analvzed Method Lab Perfluorinated Chemicals by EPA Method 537 Rev 1.1 see attached 11/22/16 EPA 537 Rev 1.1 721026460 Solid Phase Extraction by EPA Method 537 11/17/16 EPA 537 721026460 ves 5028 NLS ID: 958678 COC: 196187:7 Matrix: DW Collected: 11/09/16 10:00 Received: 11/11/16 Parameter Units Dilution LOD LOQ/MCL Analyzed Lab Result Method Perfluorinated Chemicals by EPA Method 537 Rev 1.1 see attached 11/22/16 EPA 537 Rev 1.1 721026460 Solid Phase Extraction by EPA Method 537 yes 11/17/16 EPA 537 721026460 NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

Printed: 11/23/16 Page 2 of 2

NLS Project: 270910

NLS Customer: 35655

Fax: 608 388 3136 Phone: 608 388 6546

Client: U S Army - EMECO (Fort McCoy) Attn: Mike Miller 2171 South 8th Avenue 2IMNW-MCY-SSP-E Fort McCoy, WI 54656

Project: Drinking Water - Method 537

5029 NLS ID: 958679

Collected: 11/09/16 09:50 Received: 11/11/16									
Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab	
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					11/22/16	EPA 537 Rev 1.1	721026460	
Solid Phase Extraction by EPA Method 537	yes					11/17/16	EPA 537	721026460	

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content. ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000

0000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Autor J. Out

Authorized by: R. T. Krueger President

Sample: 958672 5020 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	92.915%						S
C13-PFDA (SURR)	90.451%						S
CI3-PFDA (SURR)	90.451%						3

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958673 5021 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes:							
ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	96.406%						S
C13-PFDA (SURR)	100.576%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958674 5024 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes							
ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	93.267%						S
C13-PFDA (SURR)	84.129%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive.

Sample: 958675 5025 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	82.82%						S
C13-PFDA (SURR)	83.653%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958676 5026 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes:	6						
ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	98.922%						S
C13-PFDA (SURR)	91.007%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958677 5027 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes: 6							
ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	93.613%						S
C13-PFDA (SURR)	88.409%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958678 5028 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	104.606%						S
C13-PFDA (SURR)	102.886%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 958679 5029 Collected: 11/09/16 Analyzed: 11/22/16 - Analytes:	6						
ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	11	37		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	1.0	3.3		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	3.8	13		
perfluorooctanoic acid (PFOA)	ND	ppt	1	2.3	7.6		
perfluorononanoic acid (PFNA)	ND	ppt	1	2.3	7.7		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	3.8	13		
C13-PFHxA (SURR)	94.77%						S
C13-PFDA (SURR)	91.643%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

PFC RESULTS FOR THE TWO POTABLE WELLS ON THE EAST SIDE OF THE AIRFIELD AT THE SPARTA HANGER

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060	ANAL	_YTICAL	. REPOR	Γ	WDN WDATCP Labor E	R Laboratory ID No atory Certification PA Laboratory ID N	. 721026460 No. 105-330 Io. WI00034
Client: U S Army - EMECO (Fort McCoy) Attn: Mike Miller 2171 South 8th Avenue 2IMNW-MCY-SSP-E Fort McCoy, WI 54656					Fax: 608 3	NLS Project: NLS Customer 88 3136 Phone: 6	Page 1 of 1 272235 : 35655 :08 388 6546
Project: Perfluorinated Compounds							
S Air 1 NLS I D: 965695 COC: 177738:1 Matrix: DW Collected: 12/08/16.07:30 Received: 12/09/16							
Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached				12/15/16	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes				12/14/16	EPA 537	721026460
S Air 2 NLS I D: 965696 COC: 177738:2 Matrix: DW Collected: 12/08/16.07:40 Received: 12/09/16							
Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached				12/15/16	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes				12/14/16	EPA 537	721026460
Values in brackets represent results greater than or equal	to the LOD but less than th	he LOQ and are v	within a region of "L	ess-Certain Qua	antitation". Results greater	than or equal to the Lo	OQ are considered

to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content. ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L Reviewed by: MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Ander J. Out

Authorized by: R. T. Krueger President

__ _ _ _ _ _ _

Sample: 965695 S Air 1 Collected: 12/08/16 Analyzed: 12/15/16 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	MRL	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	90		
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	10		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	30		
perfluorooctanoic acid (PFOA)	ND	ppt	1	20		
perfluorononanoic acid (PFNA)	ND	ppt	1	20		
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	40		
C13-PFHxA (SURR)	80.901%					S
C13-PFDA (SURR)	74.849%					S
C13-PFHxA (SURR) C13-PFDA (SURR)	80.901% 74.849%					S S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 965696 S Air 2 Collected: 12/08/16 Analyzed: 12/15/16 - Analytes: 6							
ANALYTE NAME	RESULT	UNITS WWB	DIL	MRL		MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	90			
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	10			
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	30			
perfluorooctanoic acid (PFOA)	ND	ppt	1	20			
perfluorononanoic acid (PFNA)	ND	ppt	1	20			
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	40			
C13-PFHxA (SURR)	82.381%						S
C13-PFDA (SURR)	78.59%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive.

QuickTurn Due Date:		NLS SAMPLE TRACK		Staple Here							
Client #		Receiving Sample Conditions									
Client Info:	ort	Project Received Via: FedEx UPS Dunham Speedee US Mail Hand Other: Short Hold time (<72hrs)									
1/ A/ h		Rush Turn around Requested									
Prictor	X	Samples Met All Receipt Requirements YES INO - "See Specific Issues Below"									
Ship To Address	on Reverse Side	Temperature over 6.5 C	1								
Ordered By: Date:		No Chain of Custody Present									
		Chain of Custody Not Filled out									
Phone:	Order Recv'd By:	Headspace in VOA vials(>6mm)									
Fax:		Insufficient Volume									
Client Project Descriptio	n:	Incorrect/Insufficient Preservation									
Data To:	Date To Be Sampled:	Addition Comments:	Lab Instructions:								
	NLS Quote #										
Extra CC To:	Customer PO #										
	Pricing Info:		PWS ID# DNR Forms: Yes No								
	-	Client Notifications/Resolutions:	PROJECT # 2722	35							
Bill To: Reporting Instructions TAD CRQL EDD or Other type Special report to:			SAMPLE #'S BOTTLE 965695- WW 965695- FB GW SW	S REC'D and MATRIX DWTB(HCL) TB(NaThio)							
		4.14	SL/SE	D							
			COC #'s For 177738 Log - In Review/Login C	Initial Date							
Special Requirements			Date Collected Work Review								
Email Fax Paperless			17/02/11 Special Report	rt							
			1908/10 TAD/Disk								
		8	Date Rec'd Data/Pkg. Re	view 1							
			Z 60 16 Final Pkg. Ck	& CC							
			///// Billing Check								