



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

22 July 2014

MEMORANDUM FOR PUBLIC DISTRIBUTION

SUBJECT: Sampling Report, Former Pease Air Force Base Perfluorinated Compound Monitoring Program

The Air Force continues to sample production water wells and drinking water distribution points at two locations on the former Pease Air Force Base for the presence of perfluorinated compounds (PFCs). This recurring sampling follows the detection of perfluorooctanesulfonic acid (PFOS) above the Environmental Protection Agency's (EPA's) Provisional Health Advisory (PHA) screening level and which resulted in the Haven Well being shut down. The sample results to date have been very favorable. The levels of PFOS and Perfluorooctanoic Acid (PFOA), the two PFCs with established PHAs, are well below the PHA.

Air Force sampling is being conducted with the coordination of EPA, the New Hampshire Department of Environmental Services (NHDES) and the City of Portsmouth. The samples are collected in accordance with EPA drinking water sampling protocols and are analyzed by a lab certified by the National Environmental Laboratory Accreditation Program. The samples are analyzed using the EPA's accepted standard of analysis for drinking water quality. The lab tests samples for a number of different PFCs, however, EPA has not developed PHA screening levels for PFCs other than PFOS and PFOA.

The well locations and distribution points are shown on Figure 1 and the summary of analytical testing results are shown on Table 1 and Figures 2 and 3 (see Attachments).

Please contact me at (207) 328-7109, Extension 7 or peter.forbes@us.af.mil if you have questions.

Sincerely,

A handwritten signature in blue ink that reads "Peter W. Forbes".

PETER W. FORBES, GS-13, DAF
Program Manager
AFCEC/CIBE

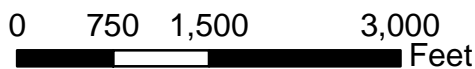
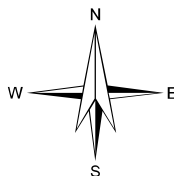
ATTACHMENTS:

- Figure 1 – Production Well and Distribution Point Location Map
- Figure 2 – PFOS Levels in Pease Water Samples
- Figure 3 – PFOA Levels in Pease Water Samples
- Table 1 – Summary of Analytical Testing Results



Legend

- Distribution Point
- Production Well



Aerial imagery courtesy of ESRI World Imagery Service

Former Pease Air Force Base

Production Well and Distribution Point Location Map

Former Pease AFB
Drinking Water Sampling Program



5383 Hollister Avenue
Suite 130
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TC NO.	DATE	DRAWN BY	MAP NO.	FIGURE
93014-31	7/22/2014	REYNOLDS	9312	1

Figure 2 - PFOS (Perfluorooctanesulfonic acid) Levels in Pease Water Samples

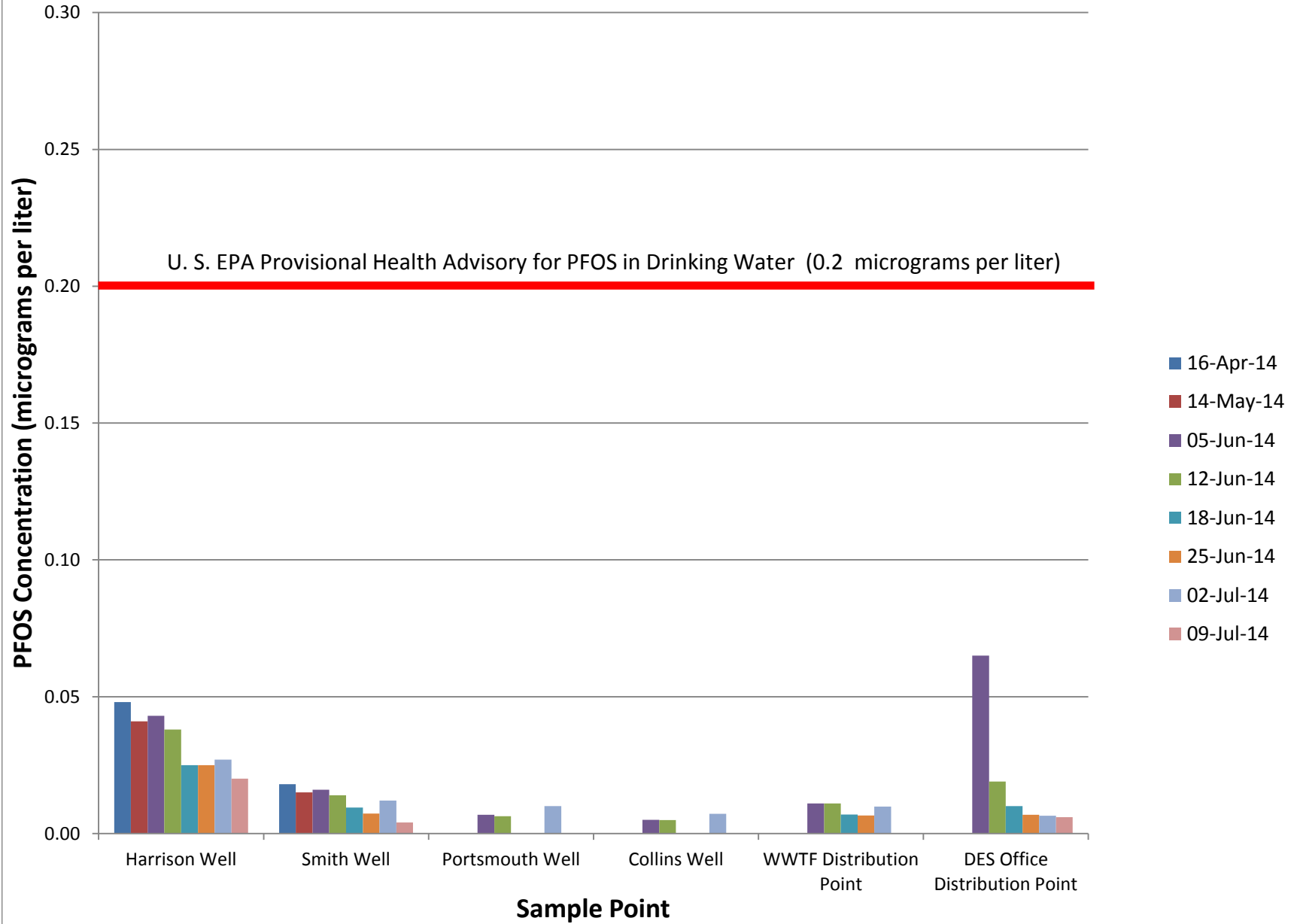
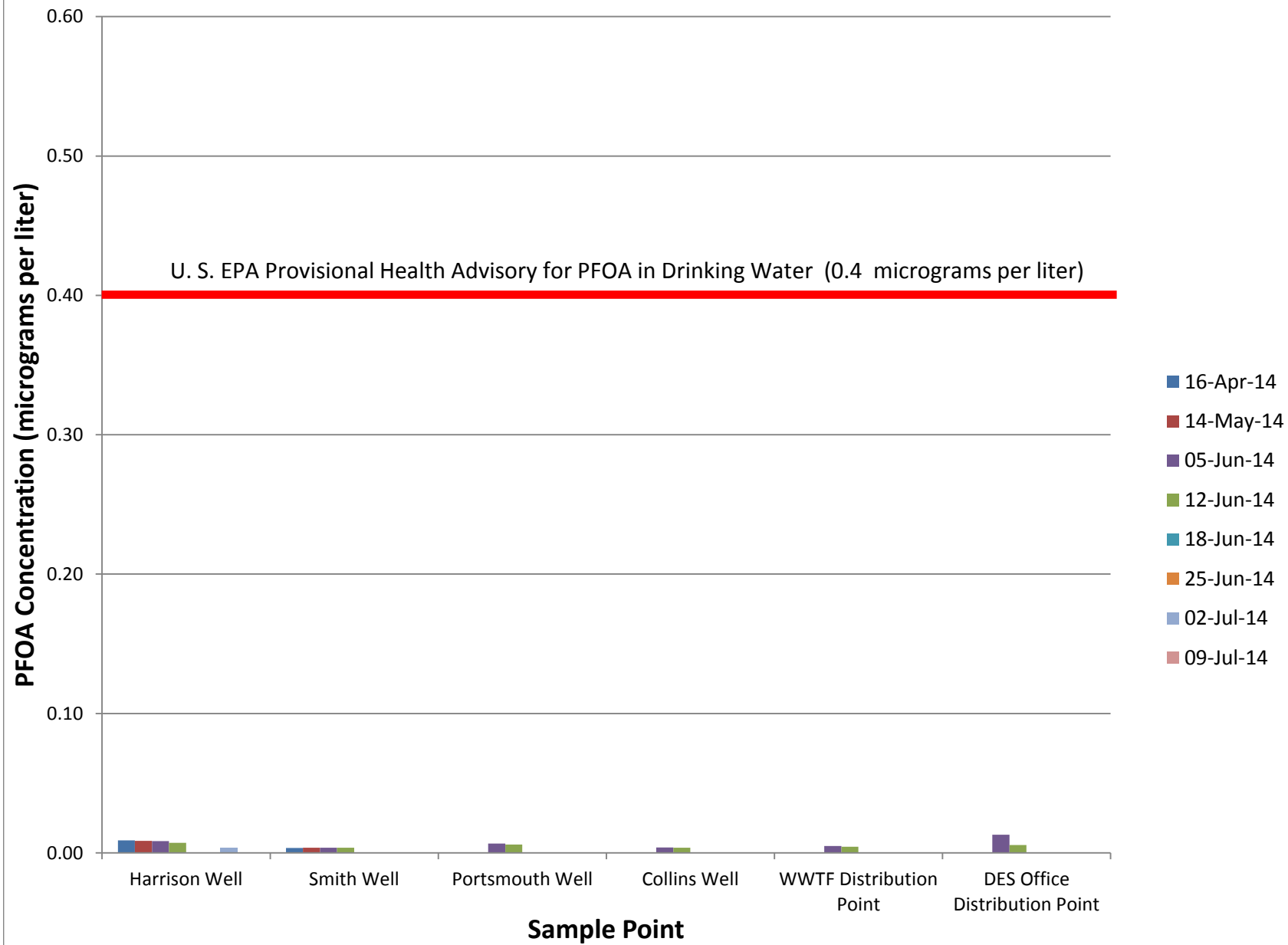


Figure 3 - PFOA (Perfluorooctanoic acid) Levels in Pease Water Samples



Summary of Maxxam Analytics, Inc. Analytical Testing Results
EPA Method 537 (µg/L)
Perfluorinated Compound Monitoring Program
Pease Air Force Base, New Hampshire

Sample Location	Sample ID	Collection Date	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonate (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluorooheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluoroundecanoic acid (PFUnA)
Method			E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537
PHA			-	-	-	-	-	-	-	-	-	-	0.2	0.4	-	-	-	-
Production Well																		
Harrison Well	Harrison-06182014	18-Jun-14	ND	0.0044 J	ND	ND	ND	ND	0.026	0.0046 J	ND	ND	0.025	ND	0.0066 J	ND	ND	ND
Harrison Well	HARRISON-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.021	ND	ND	ND	0.025	ND	0.0034 J	ND	ND	ND
Harrison Well	HARRISON-07022014	02-Jul-14	ND	0.0071 J	ND	ND	ND	ND	0.020	0.0058 J	ND	ND	0.026	0.0034 J	0.0066 J	ND	ND	ND
Harrison Well	DW-DUP-07022014 (D)	02-Jul-14	ND	0.0071 J	ND	ND	ND	ND	0.021	0.0063 J	ND	ND	0.027	0.0034 J	0.0065 J	ND	ND	ND
Harrison Well	HARRISON-07092014	09-Jul-14	ND	0.0043 J	ND	ND	ND	ND	0.019 J	0.0044 J	ND	ND	0.020	ND	ND	ND	ND	ND
Smith Well	Smith-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	0.011 J	ND	ND	ND	0.0095 J	ND	0.0042 J	ND	ND	ND
Smith Well	SMITH-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.010 J	ND	ND	ND	0.0073 J	ND	ND	ND	ND	ND
Smith Well	SMITH-07022014	02-Jul-14	ND	0.0058 J	ND	ND	ND	ND	0.0098 J	0.0030 J	ND	0.0026 J	0.012 J	ND	0.0033 J	ND	ND	ND
Smith Well	SMITH-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	0.0062 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Smith Well	DW-DUP-07092014 (D)	09-Jul-14	ND	ND	ND	ND	ND	ND	0.0061 J	ND	ND	ND	0.0043 J	ND	ND	ND	ND	ND
Portsmouth Well	Portsmouth-06182014	18-Jun-14	ND	0.0029 J	ND	ND	ND	ND	0.0058 J	ND	ND	ND	ND	ND	0.0068 J	ND	ND	ND
Portsmouth Well	PORTSMOUTH-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.0051 J	ND	ND	ND	ND	ND	0.0035 J	ND	ND	ND
Portsmouth Well	DW-DUP-06252014 (D)	25-Jun-14	ND	ND	ND	ND	ND	ND	0.0044 J	ND	ND	ND	ND	ND	0.0031 J	ND	ND	ND
Portsmouth Well	PORTSMOUTH-07022014	02-Jul-14	ND	0.0058 J	ND	ND	ND	ND	0.0055 J	0.0056 J	ND	0.0025 J	0.010 J	ND	0.0060 J	ND	ND	ND
Portsmouth Well	PORTSMOUTH-07092014	09-Jul-14	ND	0.0024 J	ND	ND	ND	ND	ND	0.0029 J	ND	ND	ND	ND	ND	ND	ND	ND
Collins Well	Collins-06182014	18-Jun-14	ND	0.0028 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Collins Well	DW-DUP-06182014 (D)	18-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Collins Well	COLLINS-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Collins Well	COLLINS-07022014	02-Jul-14	ND	0.0056 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0072 J	ND	0.0032 J	ND	ND	ND
Collins Well	COLLINS-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Distribution Point																		
WTP Distro Point	WTP-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	0.0063 J	ND	ND	ND	0.0069 J	ND	0.0050 J	ND	ND	ND
WTP Distro Point	WTP-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.0092 J	ND	ND	ND	0.0066 J	ND	ND	ND	ND	ND
WTP Distro Point	WTP-07022014	02-Jul-14	ND	0.0059 J	ND	ND	ND	ND	0.0082 J	0.0033 J	ND	ND	0.0098 J	ND	0.0056 J	ND	ND	ND
WTP Distro Point	WTP-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DES Office Distro Point	DES-OFC-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	0.011 J	0.0035 J	ND	ND	0.010 J	ND	0.0034 J	ND	ND	ND
DES Office Distro Point	DES-OFC-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.0082 J	ND	ND	ND	0.0068 J	ND	ND	ND	ND	ND
DES Office Distro Point	DES-OFC-07022014	02-Jul-14	ND	0.0024 J	ND	ND	ND	ND	0.0061 J	0.0037 J	ND	ND	0.0065 J	ND	ND	ND	ND	ND
DES Office Distro Point	DES-OFC-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	0.0064 J	0.0030 J	ND	ND	0.0059 J	ND	ND	ND	ND	ND
Sentinel Well																		
CSW-1D	CSW-1D-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CSW-1D	CSW-1D-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CSW-1D	CSW-1D-07012014	01-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CSW-1D	CSW-1D-07102014	10-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0027 J	ND	ND	ND	ND	ND
CSW-1S	CSW-1S-06172014	17-Jun-14	ND	0.0034 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0074 J	ND	0.0057 J	ND	ND	ND
CSW-1S	CSW-1S-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CSW-1S	CSW-1S-07012014	01-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CSW-1S	CSW-1S-07102014	10-Jul-14	0.0032 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0087 J	ND	0.0042 J	ND	ND	ND
HMW-03	HMW-03-06182014	18-Jun-14	ND	0.0026 J	ND	ND	ND	ND	0.012 J	0.0038 J	ND	ND	0.0088 J	ND	0.0076 J	ND	ND	ND
HMW-03	SW-DUP-06182014 (D)	18-Jun-14	ND	0.0033 J	ND	ND	ND	ND	0.013 J	0.0039 J	ND	ND	0.0088 J	ND	0.0061 J	ND	ND	ND
HMW-03	HMW-3-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	0.0074 J	ND	ND	ND	0.0051 J	ND	ND	ND	ND	ND
HMW-03	HMW-3-06302014	30-Jun-14	ND	ND	ND	ND	ND	ND	0.0073 J	ND	ND	ND	0.0095 J	ND	ND	ND	ND	ND
HMW-03	SW-DUP-06302014 (D)	30-Jun-14	ND	ND	ND	ND	ND	ND	0.0068 J	ND	ND	ND	0.0063 J	ND	ND	ND	ND	ND

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Method			E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537	E537
PHA			—	—	—	—	—	—	—	—	—	—	0.2	0.4	—	—	—	—
HMW-03	HMW-3-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	0.010 J	0.0035 J	ND	ND	0.0061 J	ND	ND	ND	ND	ND
HMW-14	HMW-14-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	0.016 J	ND	ND	ND	ND	ND	0.0036 J	ND	ND	ND
HMW-14	HMW-14-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	0.022	ND	ND	ND	ND	ND	ND	ND	ND	ND
HMW-14	SW-DUP-06262014 (D)	26-Jun-14	ND	ND	ND	ND	ND	ND	0.023	ND	ND	ND	ND	ND	ND	ND	ND	ND
HMW-14	HMW-14-07012014	01-Jul-14	ND	ND	ND	ND	ND	ND	0.032	ND	ND	ND	ND	ND	ND	ND	ND	ND
HMW-14	HMW-14-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND
SMW-A	SMW-A-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0046 J	ND	ND	ND	ND	ND
SMW-A	SMW-A-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SMW-A	SMW-A-07012014	01-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022	ND	ND	ND	ND	ND
SMW-A	SMW-A-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.020 J	ND	ND	ND	ND	ND
SMW-1	SMW-1-06172014	17-Jun-14	ND	ND	ND	ND	ND	ND	0.0059 J	ND	ND	ND	0.0062 J	ND	ND	ND	ND	ND
SMW-1	SMW-1-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	0.0069 J	ND	ND	ND	0.0068 J	ND	ND	ND	ND	ND
SMW-1	SMW-1-06302014	30-Jun-14	ND	ND	ND	ND	ND	ND	0.0038 J	ND	ND	ND	0.0094 J	ND	ND	ND	ND	ND
SMW-1	SMW-1-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	0.0045 J	0.0029 J	ND	ND	0.0065 J	ND	ND	ND	ND	ND
SMW-1	SW-DUP-07092014 (D)	09-Jul-14	ND	ND	ND	ND	ND	ND	0.0054 J	ND	ND	ND	0.0064 J	ND	ND	ND	ND	ND
SMW-13	SMW-13-06172014	17-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SMW-13	SMW-13-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0039 J	ND	ND	ND	ND	ND
SMW-13	SMW-13-06302014	30-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0040 J	ND	ND	ND	ND	ND
SMW-13	SMW-13-07092014	09-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0044 J	ND	ND	ND	ND	ND
PSW-1	PSW-1-06172014	17-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-1	PSW-1-06252014	25-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-1	PSW-1-06302014	30-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-1	PSW-1-07082014	08-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-2	PSW-2-06182014	18-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-2	PSW-2-06262014	26-Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-2	PSW-2-07012014	01-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PSW-2	PSW-2-07082014	08-Jul-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- Grey text indicates the parameter was not detected.
- D - duplicate sample
- EPA - Environmental Protection Agency
- E537 - EPA analytical method
- J - The result is an estimated value.
- µg/L - micrograms per liter
- ND - not detected
- PHA - Provisional Health Advisory screening value (EPA 2009)
- - No PHA available