

VAP-47		
Location	8/23/2018-8/28/2018	
Depth	PFOA	PFOS
6-10	< 1.8	< 1.8
16-20	< 1.8	< 1.8
26-30	0.93 J	1.3 J

VAP-17		
Location	12/12/2017	
Depth	PFOA	PFOS
16-20	<5.40	<5.28
26-30	<9.30	<9.09
36-40	<4.90	<4.79
46-50	3.47 J	<7.97
56-60	<4.37	<4.27

VAP-10		
Location	12/3/2017-12/4/2017	
Depth	PFOA	PFOS
10-14	<7.02	<2.81
20-24	<4.07 [<4.46]	<1.63 [<1.78]
31-35	<5.76	<2.30
36-40	<3.82	<1.53

VAP-11		
Location	12/4/2017-12/5/2017	
Depth	PFOA	PFOS
10-14	<3.64	<1.46
20-24	<4.08	<1.63
30-34	<4.20	<1.68
40-44	<14.2 [<5.36]	<5.66 [<2.14]

VAP-51		
Location	11/2/2018	
Depth	PFOA	PFOS
9-13	<5.7	<1.9
19-23	<5.8	<1.9
29-33	<6.0	<2.0

VAP-50		
Location	11/2/2018	
Depth	PFOA	PFOS
9-13	<5.6	<1.9
19-23	<6.1	<2.0
29-33	<5.9	<2.0

VAP-38		
Location	6/25/2018	
Depth	PFOA	PFOS
11-15	< 1.8	<1.8
21-25	<2.2	<2.2
31-35	< 2.2	2.2
41-45	< 1.8	0.77 J

VAP-37		
Location	6/25/2018 - 6/26/2018	
Depth	PFOA	PFOS
9-13	1.8 J	1.0 J
19-23	2.2	1.6 J
29-33	3.4	2.2

VAP-42		
Location	8/22/2018-8/23/2018	
Depth	PFOA	PFOS
6-10	0.78 J	1.0 J
16-20	< 1.8	<1.8
26-30	< 1.8	< 1.8
36-40	< 1.8 [< 1.8]	<1.8 [< 1.8]

VAP-48		
Location	10/26/2018	
Depth	PFOA	PFOS
6-10	16	8.4
16-20	< 2.0	< 2.0
26-30	< 1.9	< 1.9
33-37	2.4	< 1.9

VAP-40		
Location	8/21/2018	
Depth	PFOA	PFOS
10-14	1.6 J [1.6J]	<1.8 [<1.8]
16-20	16	0.86 J
26-30	1.2 j	0.53 J

VAP-41		
Location	8/22/2018	
Depth	PFOA	PFOS
6-10	1.3 J	< 1.8
16-20	4.8	10
26-30	0.91 J [0.97 J]	0.83 J [0.65 J]
36-40	< 1.8	< 1.8

VAP-36		
Location	6/26/2018	
Depth	PFOA	PFOS
6-10	4.0	6.4
16-20	300 / 570 J *	2.1 / 5.8 J *
26-30	<1.8	<1.8

VAP-36(2)		
Location	10/26/2018	
Depth	PFOA	PFOS
6-10	4.7	13
16-20	1.4 J [1.8 J]	<1.8 [<1.9 UB]
26-30	<1.9	<1.9

VAP-44		
Location	8/21/2018	
Depth	PFOA	PFOS
6-10	0.83 J	0.68 J
16-20	1.6 J	< 1.8
26-30	1.4 J [1.6 J]	< 1.8 [< 1.9]
36-40	1.9	<1.8

VAP-18		
Location	12/15/2017-12/19/2017	
Depth	PFOA	PFOS
6-10	<4.69	<4.59
16-20	<6.26 [<5.17]	<6.12 [<5.05]
26-30	61.3	<7.15
36-40	61.3	<5.09

VAP-28		
Location	8/15/2018-8/16/2018	
Depth	PFOA	PFOS
72-75	< 1.7	< 1.7
82-85	0.81 J	< 1.8
99-102	< 1.8	< 1.8

VAP-45		
Location	8/21/2018	
Depth	PFOA	PFOS
6-10	8.5	1.2 J
16-20	1.2 J	< 1.8
26-30	1.8	< 1.8

VAP-12		
Location	12/4/2017-12/5/2017	
Depth	PFOA	PFOS
8-12	<8.39	<3.36
18-22	<5.97	<2.39
28-32	<7.58	<3.03
38-42	<18.4	<7.36

VAP-35		
Location	6/26/2018 - 6/27/2018	
Depth	PFOA	PFOS
11-15	3.7 [4.0]	< 1.8 [< 1.8]
21-25	78	0.82 J
31-35	74	< 2.0
46-50	0.98 J	< 1.8

VAP-46		
Location	8/28/2018	
Depth	PFOA	PFOS
11-15	8.8	1.8 J
16-20	0.89 J [< 1.8]	< 1.8 [< 1.8]
26-30	< 1.8	< 1.8
36-40	< 1.9	< 1.9

VAP-43		
Location	8/29/2018	
Depth	PFOA	PFOS
11-15	< 1.9	1.8 J
16-20	< 1.9 [< 1.8]	< 1.8 [< 1.80]
26-30	< 1.8	< 1.8
36-40	< 1.8	< 1.9

VAP-49		
Location	10/26/2018	
Depth	PFOA	PFOS
6-10	4.9	< 1.8
16-20	< 1.9	< 1.9 UB
26-30	< 2.0	< 2.0

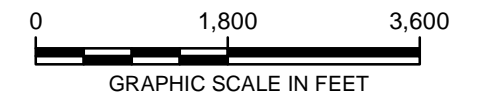
LEGEND:

- SAND-UNIT VAP BORING LOCATION
- ▲ CONFINING-UNIT VAP BORING LOCATION
- SAND-UNIT & CONFINING-UNIT VAP BORING LOCATION
- ▲ SAND-UNIT & CONFINING-UNIT VAP BORING AND BEDROCK BOREHOLE LOCATION
- APPROXIMATE SITE PROPERTY BOUNDARY
- APPROXIMATE MARINETTE CITY BOUNDARY
- ROAD
- DITCH/STREAM
- WATERBODY

NOTES:

1. PFOA = PERFLUOROOCCTANOIC ACID
2. PFOS = PERFLUOROOCCTANE SULFONIC ACID
3. VAP = VERTICAL AQUIFER PROFILING
4. ALL CONCENTRATIONS REPORTED IN UNITS OF NANOGRAMS PER LITER (ng/L)
5. SAMPLE DEPTH RANGES ARE IN UNITS OF FEET BELOW GROUND SURFACE.
6. FIELD DUPLICATE RESULTS ARE INCLUDED IN BRACKETS. RESULTS FROM REANALYSIS OF A SAMPLE ARE SEPARATED FROM THE INITIAL RESULTS WITH A SLASH AND FOLLOWED BY AN ASTERISK.
7. THE VAP-36 SAMPLE FROM DEPTH 16-20 FT, COLLECTED ON 6/26/18, WAS REANALYZED ON 8/6/18.
8. QUALIFIERS ARE DEFINED AS:
 < = COMPOUND NOT DETECTED AT THE REPORTING LIMIT.
 J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
 UB = COMPOUND CONSIDERED NON-DETECT AT THE LISTED VALUE DUE TO ASSOCIATED BLANK CONTAMINATION.
9. CITY BOUNDARY DATA SOURCE: WISCONSIN LEGISLATIVE TECHNOLOGY SERVICES BUREAU, WISCONSIN COUNTY CLERKS AND LAND INFORMATION OFFICES, ACCESSED FALL 2017.
10. DITCH/STREAM AND WATERBODY DATA SOURCE: U.S. GEOLOGICAL SURVEY NATIONAL HYDROGRAPHY DATASET, ACCESSED FALL 2017.
11. ROAD DATA SOURCE: OPEN STREET MAP, ACCESSED FALL 2017.

12/19/2018



TYCO FIRE PRODUCTS, LLC
 MARINETTE, WISCONSIN

**VAP INVESTIGATION
 ANALYTICAL RESULTS – SOUTHEAST**

ARCADIS | **FIGURE 9A**