

TABLE 2.4-4
WATER SAMPLE ANALYSIS SUMMARY OF FIELD DUPLICATE SAMPLES FOR SELECT VOCs
FYNOP, 1425 EDEN ROAD, YORK, PA 17402

Analyte	COD-SW-15	COD-SW-15	RPD	COD-SW-15	COD-SW-15	RPD	COD-SW-15	COD-SW-15	RPD
	7/15/14	7/15/14		3/10/15	3/10/15		6/15/15	6/15/15	
	Dup			Dup			Dup		
	180-34870	180-34870		180-41935	180-41935		180-45088	180-45088	
1,1,1-Trichloroethane	0.35	0.32	9.0%	0.41	0.48	15.7%	0.47	0.53	12.0%
1,1-Dichloroethane	0	0	NA	0.16	0.15	6.5%	0	0	NA
1,1-Dichloroethene	0	0	NA	0.51	0.37	31.8%	0.5	0.49	2.0%
cis-1,2-Dichloroethene	7.9	7.3	7.9%	10	9.3	7.3%	11	11	0.0%
Tetrachloroethene	5.5	4.7	15.7%	4.7	4.7	0.0%	6.2	6.1	1.6%
Trichloroethene	5.8	5.6	3.5%	8.6	7.7	11.0%	9.3	9.5	2.1%

Analyte	COD-SW-15	COD-SW-15	RPD	COD-SW-15	COD-SW-15	RPD	COD-SW-15	COD-SW-15	RPD
	7/15/15	7/15/15		8/14/15	8/14/15		9/15/15	9/15/15	
	Dup			Dup			Dup		
	180-45946	180-45946		180-46875	180-46875		180-47781	180-47781	
1,1,1-Trichloroethane	0.36	0.37	2.7%	0.52	0.55	5.6%	0.57	0.59	3.4%
1,1-Dichloroethane	0	0.14	NA	0.18	0.21	15.4%	0.26	0.25	3.9%
1,1-Dichloroethene	0.48	0.53	9.9%	0.63	0.65	3.1%	0.77	0.65	16.9%
cis-1,2-Dichloroethene	9.6	9.7	1.0%	12	12	0.0%	15	15	0.0%
Tetrachloroethene	5.4	5.7	5.4%	7.8	7.7	1.3%	9.2	8.9	3.3%
Trichloroethene	8.4	8.8	4.7%	12	11	8.7%	17	17	0.0%

Analyte	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD
	1/17/14	1/17/14		3/4/14	3/4/14		8/25/14	8/25/14	
	Dup			Dup			Dup		
	180-29094	180-29094		180-30352	180-30352		180-36095	180-36095	
1,1,1-Trichloroethane	6.7	3.1	73.5%	25	28	11.3%	6.5	8.4	25.5%
1,1-Dichloroethane	0.61	0	NA	0	2.5	NA	0	1.6	NA
1,1-Dichloroethene	0	0	NA	0	4.4	NA	1.7	1.8	5.7%
cis-1,2-Dichloroethene	10	5.5	58.1%	59	55	7.0%	24	30	22.2%
Tetrachloroethene	100	49	68.5%	390	340	13.7%	86	93	7.8%
Trichloroethene	30	15	66.7%	110	93	16.7%	27	34	23.0%

Analyte	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD
	9/22/14	9/22/14		11/3/14	11/3/14		11/20/14	11/20/14	
	Dup			Dup			Dup		
	180-36898	180-36898		180-38443	180-38443		180-39150	180-39150	
1,1,1-Trichloroethane	17	23	30.0%	15	17	12.5%	16	18	11.8%
1,1-Dichloroethane	2.8	2.5	11.3%	1.8	1.9	5.4%	0	2.2	NA
1,1-Dichloroethene	3	3.3	9.5%	2.5	3.3	27.6%	0	4	NA
cis-1,2-Dichloroethene	43	46	6.7%	39	36	8.0%	47	39	18.6%
Tetrachloroethene	260	240	8.0%	190	180	5.4%	220	200	9.5%
Trichloroethene	69	70	1.4%	77	67	13.9%	95	82	14.7%

Analyte	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD	COD-SW-17	COD-SW-17	RPD
	12/3/14	12/3/14		12/22/14	12/22/14		5/20/15	5/20/15	
	Dup			Dup			Dup		
	180-39461	180-39461		180-40076	180-40076		180-44321	180-44321	
1,1,1-Trichloroethane	27	30	10.5%	26	19	31.1%	0	0	NA
1,1-Dichloroethane	2.7	2.9	7.1%	0	0	NA	0	0	NA
1,1-Dichloroethene	5.5	5.4	1.8%	6.1	0	NA	0	0	NA
cis-1,2-Dichloroethene	61	50	19.8%	53	47	12.0%	0.98	1.4	35.3%
Tetrachloroethene	330	260	23.7%	360	260	32.3%	1.4	1.6	13.3%
Trichloroethene	120	100	18.2%	130	93	33.2%	0.94	1.1	15.7%

Analyte	CW-18	CW-18	RPD	CW-18	CW-18	RPD	CW-18	CW-18	RPD
	6/5/14	6/5/14		7/8/14	7/8/14		2/26/15	2/26/15	
	Dup			Dup			Dup		
	180-33551	180-33551		180-34653	180-34653		180-41569	180-41569	
1,1,1-Trichloroethane	0.33	0.45	30.8%	1	0.53	61.4%	0	0	NA
1,1-Dichloroethane	0	1	NA	1.3	0.88	38.5%	1.8	1.7	5.7%
1,1-Dichloroethene	1.2	1.8	40.0%	1.8	1.4	25.0%	0.99	0.95	4.1%
cis-1,2-Dichloroethene	36	42	15.4%	52	55	5.6%	30	29	3.4%
Tetrachloroethene	0.75	0.82	8.9%	0	1.7	NA	0.45	0.51	12.5%
Trichloroethene	10	12	18.2%	27	27	0.0%	7.4	7.4	0.0%

Key:

45.0%	Pink highlighted cells indicate a 30% exceedence of the RPD.
NA	RPD cannot be calculated or is not meaningful because one or both results are non-detect.
35.0%	One result is less than five times the reporting level for VOCs (1 ug/L x 5 = 5 ug/L) and the results are within three times the reporting level (3 ug/L) of each other. Therefore, the RPD is acceptable per Table A-4 of the QAPP.

TABLE 2.4-4
WATER SAMPLE ANALYSIS SUMMARY OF FIELD DUPLICATE SAMPLES FOR SELECT VOCs
FYNOP, 1425 EDEN ROAD, YORK, PA 17402

Analyte	CW-7A	CW-7A	RPD	MW-100D	MW-100D	RPD	MW-100D	MW-100D	RPD
	10/6/15	10/6/15		4/21/14	4/21/14		5/19/14	5/19/14	
	180-48564	180-48564		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	0	0	NA	2.2	2.1	4.7%	1.5	1.7	12.5%
1,1-Dichloroethane	0	0	NA	0.89	0.94	5.5%	0.85	1	16.2%
1,1-Dichloroethene	0	0	NA	3.2	3.2	0.0%	2.5	2.9	14.8%
cis-1,2-Dichloroethene	2	2	0.0%	42	41	2.4%	34	37	8.5%
Tetrachloroethene	8.6	9.2	6.7%	84	72	15.4%	42	48	13.3%
Trichloroethene	130	120	8.0%	110	92	17.8%	52	68	26.7%

Analyte	MW-100D	MW-100D	RPD	MW-100I	MW-100I	RPD	MW-100I	MW-100I	RPD
	10/6/14	10/6/14		8/5/14	8/5/14		9/8/14	9/8/14	
	180-37353	180-37353		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	0.82	0.92	11.5%	0.99	0.82	18.8%	0.88	0.76	14.6%
1,1-Dichloroethane	0.66	0	NA	0.48	0.44	8.7%	0.4	0.37	7.8%
1,1-Dichloroethene	1.6	1.6	0.0%	1.4	1.3	7.4%	1.1	1	9.5%
cis-1,2-Dichloroethene	24	26	8.0%	19	20	5.1%	18	17	5.7%
Tetrachloroethene	32	34	6.1%	24	23	4.3%	19	18	5.4%
Trichloroethene	41	38	7.6%	36	35	2.8%	31	24	25.5%

Analyte	MW-100I	MW-100I	RPD	MW-100I	MW-100I	RPD	MW-100S	MW-100S	RPD
	10/28/14	10/28/14		3/24/15	3/24/15		7/1/14	7/1/14	
	180-38183	180-38183		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	1	1.6	46.2%	1.4	1.4	0.0%	2.2	2.4	8.7%
1,1-Dichloroethane	0.42	0.35	18.2%	0.61	0.59	3.3%	0	0.94	NA
1,1-Dichloroethene	1.3	0	NA	1.4	1.6	13.3%	2.4	2.6	8.0%
cis-1,2-Dichloroethene	21	9.1	79.1%	22	22	0.0%	32	33	3.1%
Tetrachloroethene	20	10	66.7%	22	23	4.4%	62	41	40.8%
Trichloroethene	29	9	105.3%	33	34	3.0%	77	49	44.4%

Analyte	MW-101D	MW-101D	RPD	MW-102S	MW-102S	RPD	MW-103D	MW-103D	RPD
	10/13/14	10/13/14		10/21/14	10/21/14		10/17/14	10/17/14	
	180-37661	180-37661		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	0	0	NA	9.5	11	14.6%	0	0	NA
1,1-Dichloroethane	0.34	0.31	9.2%	0.92	1	8.3%	0	0	NA
1,1-Dichloroethene	0	0	NA	8.9	9.8	9.6%	0	0	NA
cis-1,2-Dichloroethene	16	16	0.0%	4	4.5	11.8%	6.3	5.5	13.6%
Tetrachloroethene	2.5	2.4	4.1%	13	14	7.4%	11	9.8	11.5%
Trichloroethene	6.8	6.9	1.5%	28	30	6.9%	69	71	2.9%

Analyte	MW-108S	MW-108S	RPD	MW-110	MW-110	RPD	MW-114	MW-114	RPD
	9/13/13	9/13/13		10/1/15	10/1/15		8/7/14	8/7/14	
	180-25129	180-25129		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	0	0	NA	0	0	NA	0	0	NA
1,1-Dichloroethane	0	0	NA	0	0	NA	6.4	6	6.5%
1,1-Dichloroethene	0	0	NA	0	0	NA	4.8	4.6	4.3%
cis-1,2-Dichloroethene	0	0	NA	0	0	NA	1200	1500	22.2%
Tetrachloroethene	0	0	NA	80	60	28.6%	5.4	5.5	1.8%
Trichloroethene	0	0	NA	1.3	1.4	7.4%	56	56	0.0%

Analyte	MW-12	MW-12	RPD	MW-128	MW-128	RPD	MW-128	MW-128	RPD
	5/31/13	5/31/13		7/6/12	7/6/12		10/15/14	10/15/14	
	180-21771	180-21771		Dup	Dup		Dup	Dup	
1,1,1-Trichloroethane	0	0	NA	0	0	NA	1.8	1.6	11.8%
1,1-Dichloroethane	0	0	NA	0	0	NA	0	0.55	NA
1,1-Dichloroethene	0	0	NA	14	12	15.4%	2	1.7	16.2%
cis-1,2-Dichloroethene	47	25	61.1%	210	240	13.3%	75	75	0.0%
Tetrachloroethene	1.9	1.4	30.3%	11	15	30.8%	3.7	4.2	12.7%
Trichloroethene	63	57	10.0%	420	450	6.9%	36	34	5.7%

Key:	
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NA	RPD cannot be calculated or is not meaningful because one or both results are non-detect.
35.0%	One result is less than five times the reporting level for VOCs (1 ug/L x 5 = 5 ug/L) and the results are within three times the reporting level (3 ug/L) of each other. Therefore, the RPD is acceptable per Table A-4 of the QAPP.

TABLE 2.4-4
WATER SAMPLE ANALYSIS SUMMARY OF FIELD DUPLICATE SAMPLES FOR SELECT VOCs
FYNOP, 1425 EDEN ROAD, YORK, PA 17402

Analyte	MW-136A (372.5-373)	MW-136A (372.5-373)	RPD	MW-137A (295_5-296)	MW-137A (295_5-296)	RPD	MW-137A (343-343_5)	MW-137A (343-343_5)	RPD
	8/14/14	8/14/14		11/7/13	11/7/13		9/25/13	9/25/13	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-35839	180-35839		180-27020	180-27020		180-25546	180-25546	
1,1,1-Trichloroethane	40	60	40.0%	0	0	NA	0	0	NA
1,1-Dichloroethane	0	18	NA	0	0	NA	1.4	2.7	63.4%
1,1-Dichloroethene	31	29	6.7%	16	0	NA	0	0	NA
cis-1,2-Dichloroethene	1600	2300	35.9%	920	880	4.4%	74	120	47.4%
Tetrachloroethene	3400	5000	38.1%	14	0	NA	0.94	0.97	3.1%
Trichloroethene	19000	16000	17.1%	380	310	20.3%	26	36	32.3%

Analyte	MW-137A (420-420.5)	MW-137A (420-420_5)	RPD	MW-142S	MW-142S	RPD	MW-145A	MW-145A	RPD
	9/4/13	9/4/13		11/12/12	11/12/12		5/18/15	5/18/15	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-24770	180-24770		180-16312	180-16312		180-44203	180-44203	
1,1,1-Trichloroethane	0	0	NA	0	0	NA	0.58	0.61	5.0%
1,1-Dichloroethane	6.9	6.1	12.3%	0	0	NA	0	0.24	NA
1,1-Dichloroethene	0	0	NA	0	0	NA	0.48	0.68	34.5%
cis-1,2-Dichloroethene	310	300	3.3%	0.75	0.82	8.9%	10	10	0.0%
Tetrachloroethene	0	0	NA	0	0	NA	9.2	9.5	3.2%
Trichloroethene	16	16	0.0%	0.26	0.28	7.4%	13	13	0.0%

Analyte	MW-147A	MW-147A	RPD	MW-147A	MW-147A	RPD	MW-16D	MW-16D	RPD
	9/17/13	9/17/13		1/23/14	1/23/14		9/10/13	9/10/13	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-25207	180-25207		180-29231	180-29231		180-24957	180-24957	
1,1,1-Trichloroethane	0	0	NA	0	0	NA	0	0	NA
1,1-Dichloroethane	0	0	NA	0	0	NA	0	0	NA
1,1-Dichloroethene	0	0	NA	0.39	0.35	10.8%	0	0	NA
cis-1,2-Dichloroethene	1.6	1.7	6.1%	11	10	9.5%	7.8	6.8	13.7%
Tetrachloroethene	3.2	3.8	17.1%	4.2	4.1	2.4%	0	0	NA
Trichloroethene	4.7	5.2	10.1%	9	9.3	3.3%	16	19	17.1%

Analyte	MW-32S	MW-32S	RPD	MW-37S	MW-37S	RPD	MW-37S	MW-37S	RPD
	9/21/15	9/21/15		2/19/14	2/19/14		6/2/14	6/2/14	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-47984	180-47984		180-29980	180-29980		180-33401	180-33401	
1,1,1-Trichloroethane	220	230	4.4%	21	25	17.4%	7.6	7.8	2.6%
1,1-Dichloroethane	55	55	0.0%	5.7	6.1	6.8%	0	0	NA
1,1-Dichloroethene	41	39	5.0%	3.6	5.4	40.0%	1.2	1.3	8.0%
cis-1,2-Dichloroethene	240	250	4.1%	110	140	24.0%	190	190	0.0%
Tetrachloroethene	120	130	8.0%	170	170	0.0%	200	190	5.1%
Trichloroethene	210	220	4.7%	67	75	11.3%	34	34	0.0%

Analyte	MW-37S	MW-37S	RPD	MW-39D	MW-39D	RPD	MW-43D	MW-43D	RPD
	1/13/15	1/13/15		9/9/14	9/9/14		9/5/13	9/5/13	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-40434	180-40434		180-36521	180-36521		180-24825	180-24825	
1,1,1-Trichloroethane	24	18	28.6%	6.2	7.1	13.5%	0	0	NA
1,1-Dichloroethane	4.9	4.4	10.8%	1.5	1.5	0.0%	0	0	NA
1,1-Dichloroethene	4.6	4.2	9.1%	3.2	3.2	0.0%	0	0	NA
cis-1,2-Dichloroethene	100	93	7.3%	85	81	4.8%	9	7.3	20.9%
Tetrachloroethene	260	270	3.8%	56	55	1.8%	5.5	5.1	7.5%
Trichloroethene	70	57	20.5%	100	100	0.0%	140	98	35.3%

Analyte	MW-51D	MW-51D	RPD	MW-82	MW-82	RPD	MW-93S	MW-93S	RPD
	3/21/14	3/21/14		10/23/14	10/23/14		2/23/15	2/23/15	
	Dup	Dup		Dup	Dup		Dup	Dup	
	180-30887	180-30887		180-38054	180-38054		180-41453	180-41453	
1,1,1-Trichloroethane	0	1.2	NA	0	0	NA	3.2	3.4	6.1%
1,1-Dichloroethane	0	2.2	NA	0.58	0	NA	0.9	0.98	8.5%
1,1-Dichloroethene	2.5	6.7	91.3%	0.41	0.39	5.0%	0.85	0.89	4.6%
cis-1,2-Dichloroethene	59	88	39.5%	22	21	4.7%	85	88	3.5%
Tetrachloroethene	7.9	12	41.2%	1.9	1.7	11.1%	52	51	1.9%
Trichloroethene	76	120	44.9%	7.3	7.3	0.0%	34	35	2.9%

Key:

45.0%	Pink highlighted cells indicate a 30% exceedence of the RPD.
NA	RPD cannot be calculated or is not meaningful because one or both results are non-detect.
35.0%	One result is less than five times the reporting level for VOCs (1 ug/L x 5 = 5 ug/L) and the results are within three times the reporting level (3 ug/L) of each other. Therefore, the RPD is acceptable per Table A-4 of the QAPP.

TABLE 2.4-4
WATER SAMPLE ANALYSIS SUMMARY OF FIELD DUPLICATE SAMPLES FOR SELECT VOCs
FYNOP, 1425 EDEN ROAD, YORK, PA 17402

Analyte	MW-93S	MW-93S	RPD	MW-95	MW-95	RPD	MW-97	MW-97	RPD
	9/25/15	9/25/15		3/18/14	3/18/14		4/21/15	4/21/15	
	Dup			Dup			Dup		
	180-48181	180-48181		180-30762	180-30762		180-43305	180-43305	
1,1,1-Trichloroethane	6.8	6	12.5%	0	0	NA	15	14	6.9%
1,1-Dichloroethane	1.1	1.1	0.0%	0	0	NA	0	6.8	NA
1,1-Dichloroethene	0.95	0.77	20.9%	0	0	NA	10	7.9	23.5%
cis-1,2-Dichloroethene	23	22	4.4%	0.77	0.87	12.2%	340	330	3.0%
Tetrachloroethene	90	82	9.3%	0.5	0.58	14.8%	88	77	13.3%
Trichloroethene	31	31	0.0%	0.62	0.7	12.1%	520	490	5.9%

Analyte	MW-98I	MW-98I	RPD	MW-98S	MW-98S	RPD	MW-98S	MW-98S	RPD
	1/15/15	1/15/15		5/7/14	5/7/14		3/26/15	3/26/15	
	Dup			Dup			Dup		
	180-40505	180-40505		180-32564	180-32564		180-42445	180-42445	
1,1,1-Trichloroethane	7.2	7.3	1.4%	0	0	NA	1.8	2.7	40.0%
1,1-Dichloroethane	0.84	0.88	4.7%	0	0	NA	0.27	0.42	43.5%
1,1-Dichloroethene	2.1	2.3	9.1%	0	0	NA	0.59	0.92	43.7%
cis-1,2-Dichloroethene	31	31	0.0%	0.74	1.6	73.5%	9.1	11	18.9%
Tetrachloroethene	31	32	3.2%	0.7	2	96.3%	12	13	8.0%
Trichloroethene	31	31	0.0%	0.7	1.9	92.3%	10	11	9.5%

Analyte	MW-98S	MW-98S	RPD	MW-99S	MW-99S	RPD	MW-99S	MW-99S	RPD
	4/20/15	4/20/15		5/6/14	5/6/14		6/30/14	6/30/14	
	Dup			Dup			Dup		
	180-43257	180-43257		180-32508	180-32508		180-34453	180-34453	
1,1,1-Trichloroethane	1.2	1.1	8.7%	6	3.5	52.6%	4.1	3.2	24.7%
1,1-Dichloroethane	0.25	0.29	14.8%	1.3	1.3	0.0%	1.3	0	NA
1,1-Dichloroethene	0.59	0.54	8.8%	2.7	2.8	3.6%	2	1.4	35.3%
cis-1,2-Dichloroethene	8.6	8.2	4.8%	34	29	15.9%	28	26	7.4%
Tetrachloroethene	9.4	9	4.3%	29	25	14.8%	24	19	23.3%
Trichloroethene	8.2	7.9	3.7%	45	39	14.3%	38	34	11.1%

Analyte	MW-99S	MW-99S	RPD	MW-99S	MW-99S	RPD
	10/7/14	10/7/14		10/30/14	10/30/14	
	Dup			Dup		
	180-37397	180-37397		180-38318	180-38318	
1,1,1-Trichloroethane	6	4.4	30.8%	5.8	5.8	0.0%
1,1-Dichloroethane	1.7	1.5	12.5%	1.8	1.8	0.0%
1,1-Dichloroethene	2.4	2.2	8.7%	2.7	2.7	0.0%
cis-1,2-Dichloroethene	35	31	12.1%	35	35	0.0%
Tetrachloroethene	22	20	9.5%	24	24	0.0%
Trichloroethene	36	29	21.5%	31	32	3.2%

Key:

45.0%	Pink highlighted cells indicate a 30% exceedence of the RPD.
NA	RPD cannot be calculated or is not meaningful because one or both results are non-detect.
35.0%	One result is less than five times the reporting level for VOCs (1 ug/L x 5 = 5 ug/L) and the results are within three times the reporting level (3 ug/L) of each other. Therefore, the RPD is acceptable per Table A-4 of the QAPP.