Appendix 1 - Tables

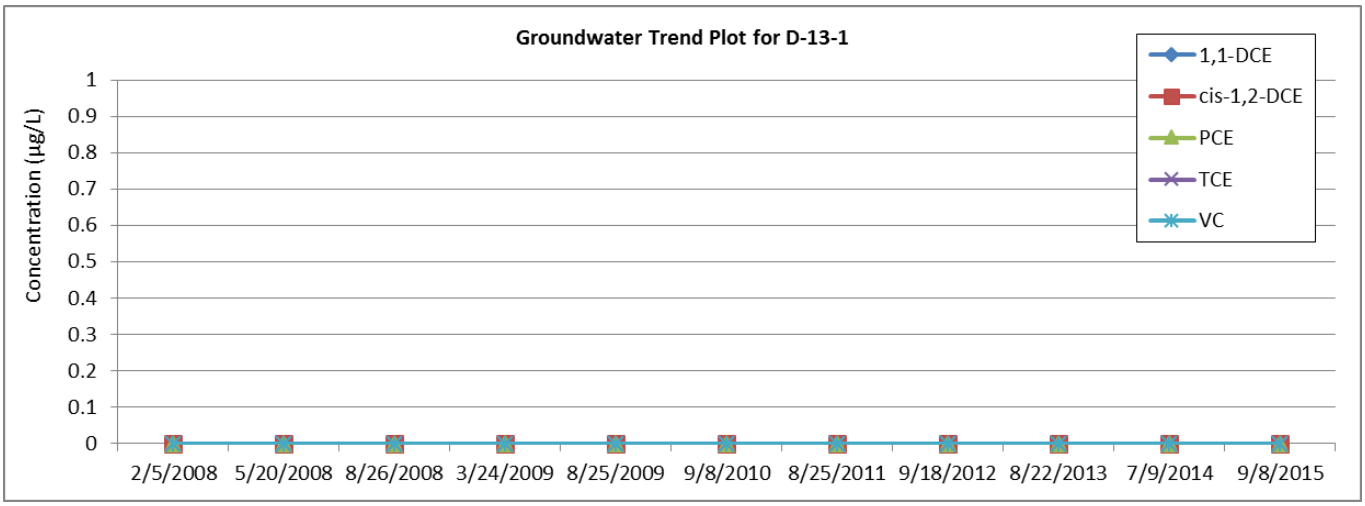
Table 1-2: Picatinny Sites Included in Fifth Five-Year Review

Picatinny Arsenal				
Key to Picatinny Group and Site Names, AEDB-R Numbers and RI Concept Site Numbers				
		AEDB-R Number		
Group or Site Name	**Phase**	**Open Site**	**Administratively Closed Site (at Response Complete)**	**RI Concept Site Number**
Group of 11	LTM	PICA-020		19
			PICA-036	106
			PICA- 070	28
			PICA-092	163
			PICA-095	86
			PICA-099	182
			PICA-100	183
			PICA-105	124
			PICA-110	141
			PICA-112	143
			PICA-118	135
Waste Burial Area	LTM	PICA-093		180
Waste Dumps & Labs	LTM	PICA-102		61
			PICA-103	104
Pyro Range & Landfill	LTM	PICA-066		24
			PICA-063	20
Landfill & Dredge Pile	LTM	PICA-067		25
			PICA-068	26
DRMO	LTM	PICA-072		31
			PICA-116	101
Post Farm Landfill	LTM	PICA-065		23
Area C	LTM	PICA-206		No #
Lower Burning Ground	LTM	PICA-002		34
25 Site Group	LTM - Monitoring of Land Use & 5 Year Reviews	PICA-001		17/18
		PICA-006		16
		PICA-022		50
			PICA-047	63/65
		PICA-085		46
			PICA 073	32
			PICA 074	33
			PICA 140	97
			PICA 142	105
			PICA 064	147
			PICA 148	148
			PICA 150	150
			PICA 156	184
		PICA-143		108
		PICA-163		91
			PICA 021	35
			PICA 172	161
			PICA 174	166
			PICA 168	168
			PICA 169	169
		PICA-171		171
			PICA 173	162
		PICA-192		189
		PICA-199		199
GP & BS Brooks	LTM	PICA 193		190
			PICA-194	No #

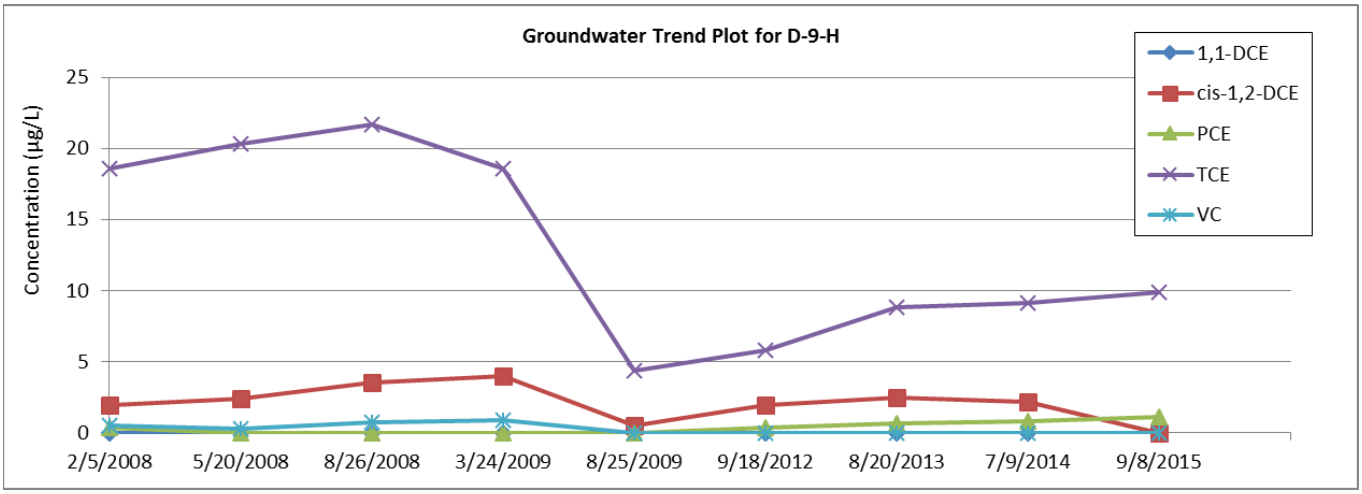
Table 1-2: Picatinny Sites Included in Fifth Five-Year Review

Picatinny Arsenal				
Key to Picatinny Group and Site Names, AEDB-R Numbers and RI Concept Site Numbers				
		AEDB-R Number		
Group or Site Name	**Phase**	**Open Site**	**Administratively Closed Site (at Response Complete)**	**RI Concept Site Number**
21 Site Group	LTM - Monitoring of Land Use & 5 Year Reviews	PICA-096		117
			PICA-117	134
			PICA-119	136
			PICA-188	185
			PICA-056	10
			PICA-069	27
			PICA-185	119
			PICA-186	120
			PICA-187	121
			PICA-094	69
			PICA-098	123
			PICA-101	60
			PICA-114	145
			PICA-158	175
			PICA-161	174
			PICA-159	172
			PICA-189	186
			PICA-177	177
			PICA-183	164
			PICA-176	176
			PICA-208	No #
Area D	RAO	PICA-076		37
			PICA-120	21
Area E	RAO	PICA-077		38
			PICA-010	22
Group 1	RAO	PICA-079		40
			PICA-139	93
			PICA-151	156
			PICA-152	157
Mid-Valley	RAO	PICA-204		No #
Group 3	RAO	PICA-008		2 (GW & SW only)
			PICA-007	1
			PICA-157	4
Area B	RAO	PICA-205		No #
RI Concept Plan Site 78	RAO	PICA-013		78 (GW & SW only)

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey

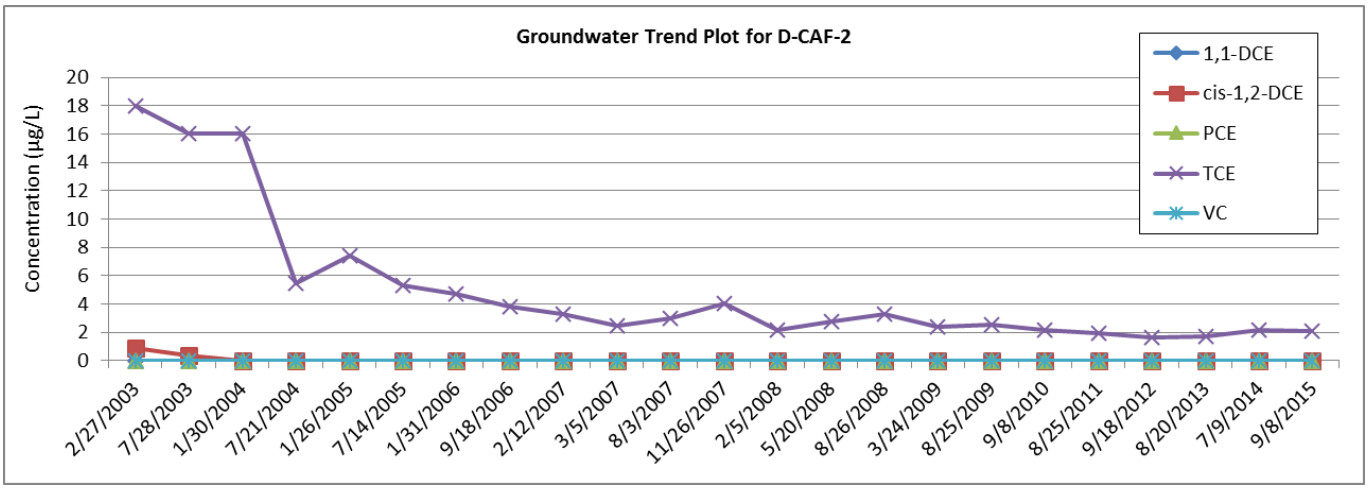


Analyte	2/5/2008	5/20/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/22/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0



Analyte	2/5/2008	5/20/2008	8/26/2008	3/24/2009	8/25/2009	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	1.91	2.36	3.53	3.94	0.505	1.92	2.45	2.18	0
Tetrachloroethene	0.34	0	0	0	0	0.314	0.651	0.808	1.1
Trichloroethene	18.6	20.3	21.7	18.6	4.36	5.81	8.82	9.11	9.9
Vinyl chloride	0.509	0.29	0.733	0.884	0	0	0	0	0

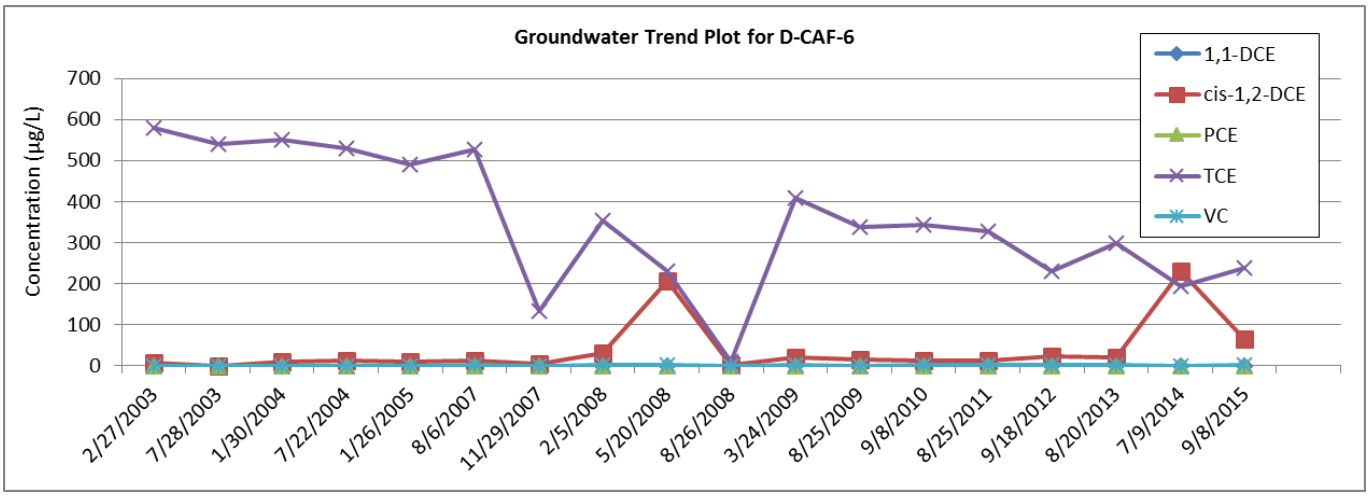
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	2/27/2003	7/28/2003	1/30/2004	7/21/2004	1/26/2005	7/14/2005	1/31/2006	9/18/2006	2/12/2007	3/5/2007	8/3/2007
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.86	0.33	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	18	16	16	5.5	7.4	5.3	4.7	3.81	3.26	2.45	2.97
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

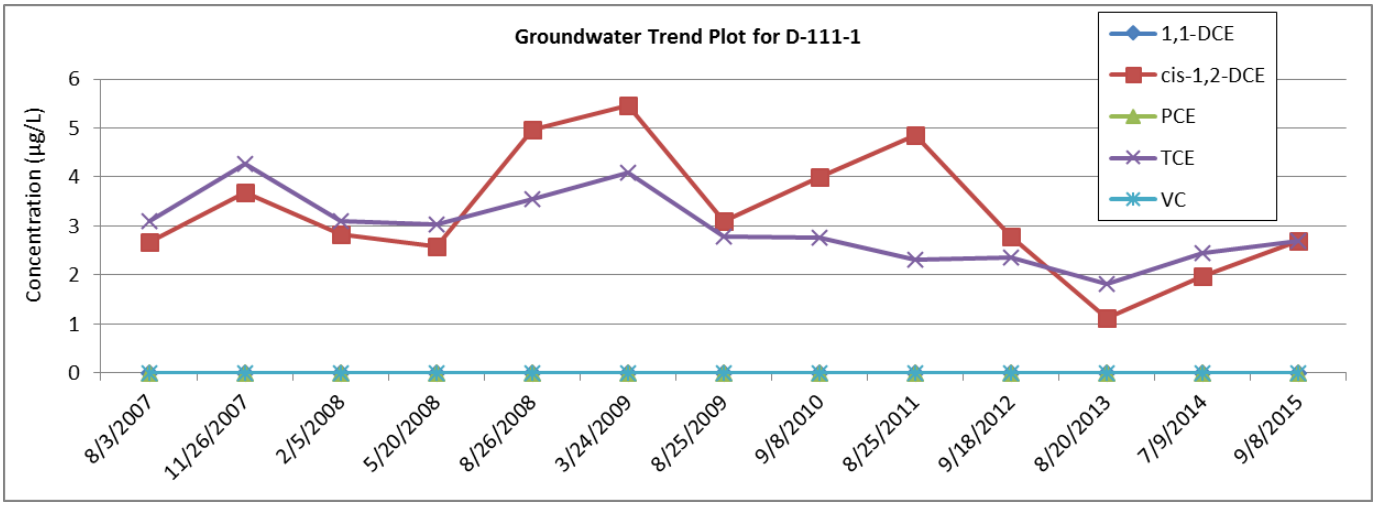
Analyte	11/26/2007	2/5/2008	5/20/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	4.05	2.18	2.8	3.27	2.37	2.51	2.16	1.95	1.61	1.7	2.2	2.1
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	2/27/2003	7/28/2003	1/30/2004	7/22/2004	1/26/2005	8/6/2007	11/29/2007	2/5/2008	5/20/2008	8/26/2008	3/24/2009
1,1-Dichloroethene	0	0	0	0	0	0.734	0	0	0	0	0
cis-1,2-Dichloroethene	7.6	0	9.1	14	10	12.1	4.41	30	206	1.1	19.4
Tetrachloroethene	0	0	0	0	0	0.7	0.298	0	0	0	0
Trichloroethene	580	540	550	530	490	528	133	353	230	9.99	408
Vinyl chloride	0	0	0	0	0	2.62	0	1.89	3.17	0	3.56

Analyte	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0.62
cis-1,2-Dichloroethene	14.4	13.7	13.9	22.4	20.5	231	65.9
Tetrachloroethene	0	0	0	0	0	0	0
Trichloroethene	339	343	328	230	299	194	239
Vinyl chloride	0	3.36	1.2	2.18	1.01	0.943	3.3



Analyte	8/3/2007	11/26/2007	2/5/2008	5/20/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	2.68	3.68	2.83	2.59	4.97	5.47	3.11	4	4.86	2.79	1.13	1.98	2.7
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	3.1	4.26	3.11	3.04	3.56	4.1	2.79	2.77	2.32	2.35	1.81	2.44	2.7
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0	0

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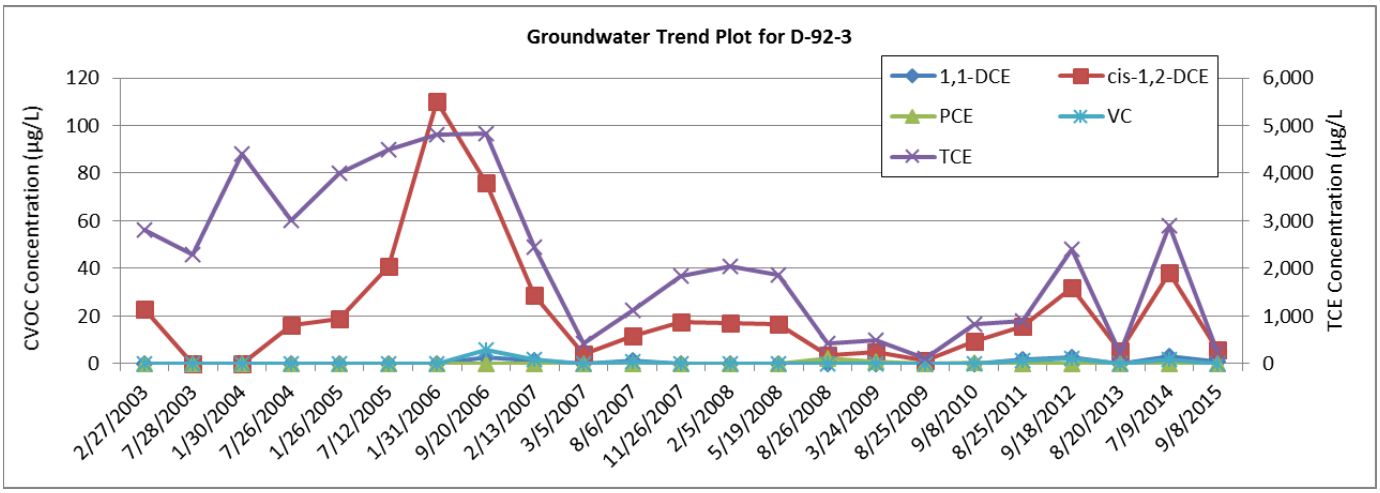
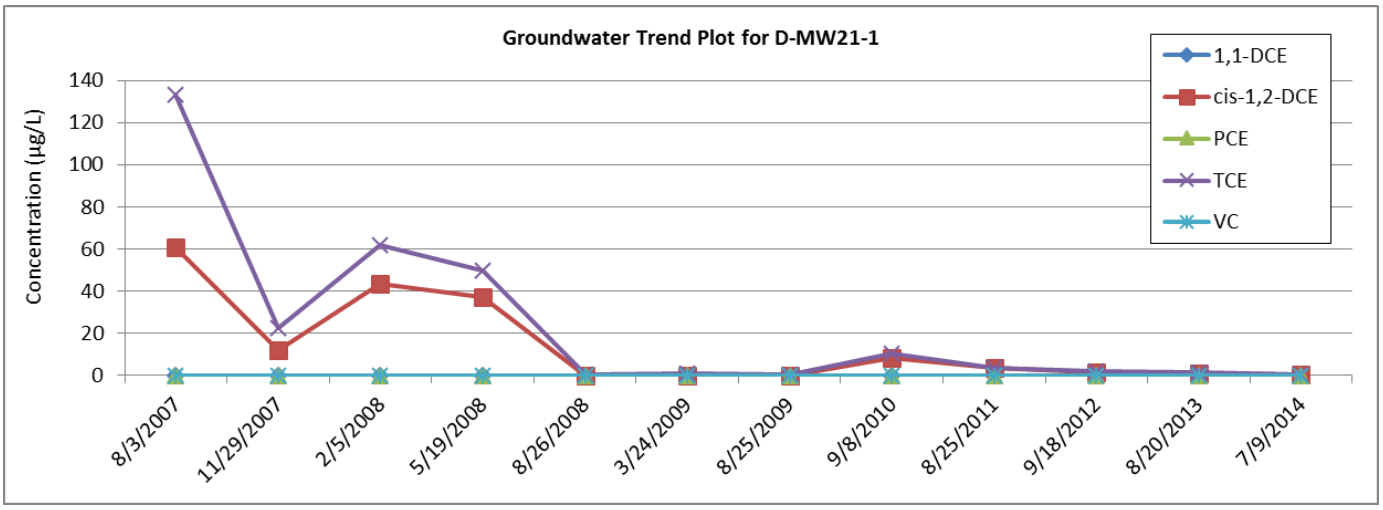
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



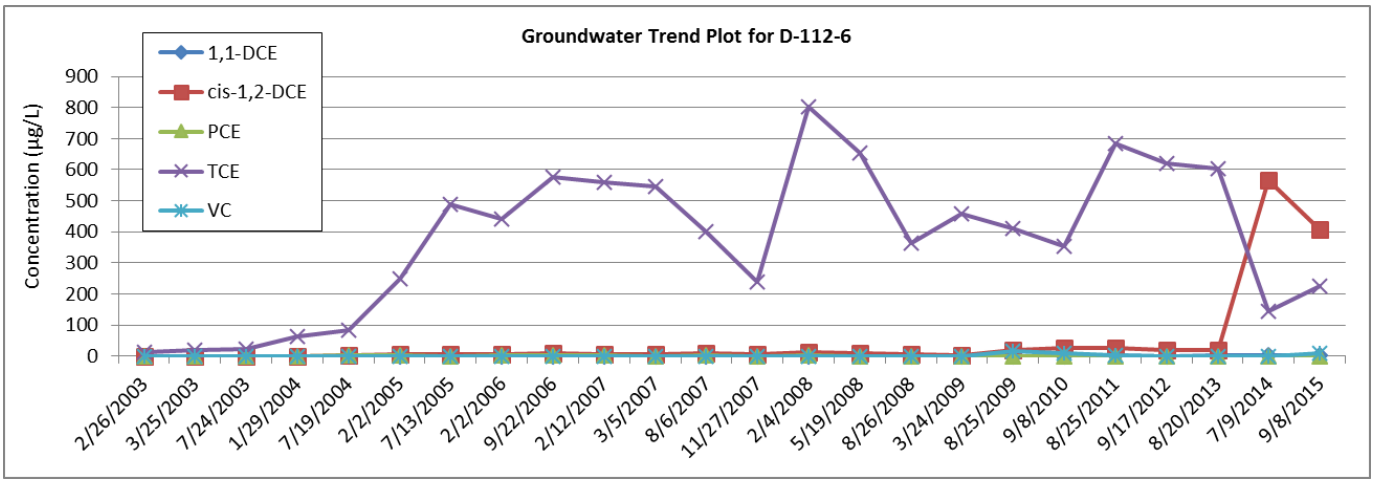
Analyte	2/27/2003	7/28/2003	1/30/2004	7/26/2004	1/26/2005	7/12/2005	1/31/2006	9/20/2006	2/13/2007	3/5/2007	8/6/2007
1,1-Dichloroethene	0	0	0	0	0	0	0	2.81	1.33	0	1.25
cis-1,2-Dichloroethene	23	0	0	16	19	41	110	76.1	28.7	4.02	11.8
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	2800	2300	4400	3000	4000	4500	4800	4830	2440	422	1130
Vinyl chloride	0	0	0	0	0	0	0	5.69	1.7	0	0.71

Analyte	11/26/2007	2/5/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	1.54	2.79	0	3.26	0.7
cis-1,2-Dichloroethene	17.4	17	16.6	3.74	4.79	1.37	9.47	15.8	32.1	5.12	38.2	5.8
Tetrachloroethene	0	0	0	2.28	0.703	0	0.316	0	0	0	0	0
Trichloroethene	1840	2050	1860	419	482	109	832	903	2400	221	2900	248
Vinyl chloride	0	0	0	0	0	0	0	1.12	2.15	0	1.56	0



Analyte	8/3/2007	11/29/2007	2/5/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/18/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	60.7	12.2	43.6	37.3	0	0	0	8.56	3.86	1.73	0.937	0.51	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	133	22.7	61.8	50	0.466	0.812	0.274	10.6	3.66	2.14	1.61	0.632	1.4
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey

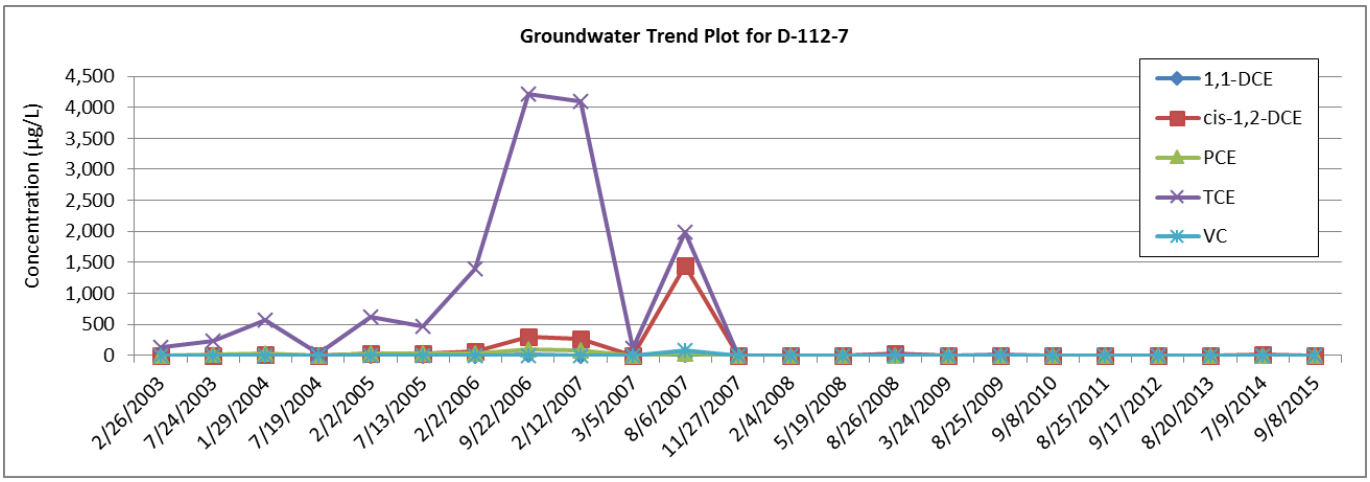


Analyte	2/26/2003	3/25/2003	7/24/2003	1/29/2004	7/19/2004	2/2/2005	7/13/2005	2/2/2006	9/22/2006	2/12/2007	3/5/2007
1,1-Dichloroethene	0	0	0	0	0	0	0	0	1.1	0	0
cis-1,2-Dichloroethene	0	0.55	0	0	2.5	7.5	7.1	5.5	9.78	5.82	7.51
Tetrachloroethene	0.37	0.57	0.49	0	1.5	2.2	0	2.3	3.03	1.87	0
Trichloroethene	13	19	23	64	85	250	490	440	575	558	545
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	8/6/2007	11/27/2007	2/4/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/17/2012	8/20/2013
1,1-Dichloroethene	0	0	1.25	0	0	0	0	0	1.42	0	1.39
cis-1,2-Dichloroethene	8.54	5.07	12.6	8.87	6.8	2.19	19.3	27.5	25	20.4	19
Tetrachloroethene	1.89	0	1.44	0	0	0.686	0	0	0.751	0	0.293
Trichloroethene	401	239	802	655	364	458	412	354	685	620	604
Vinyl chloride	0	0	0	0	0	0	17.4	8.6	3.45	0	0.951

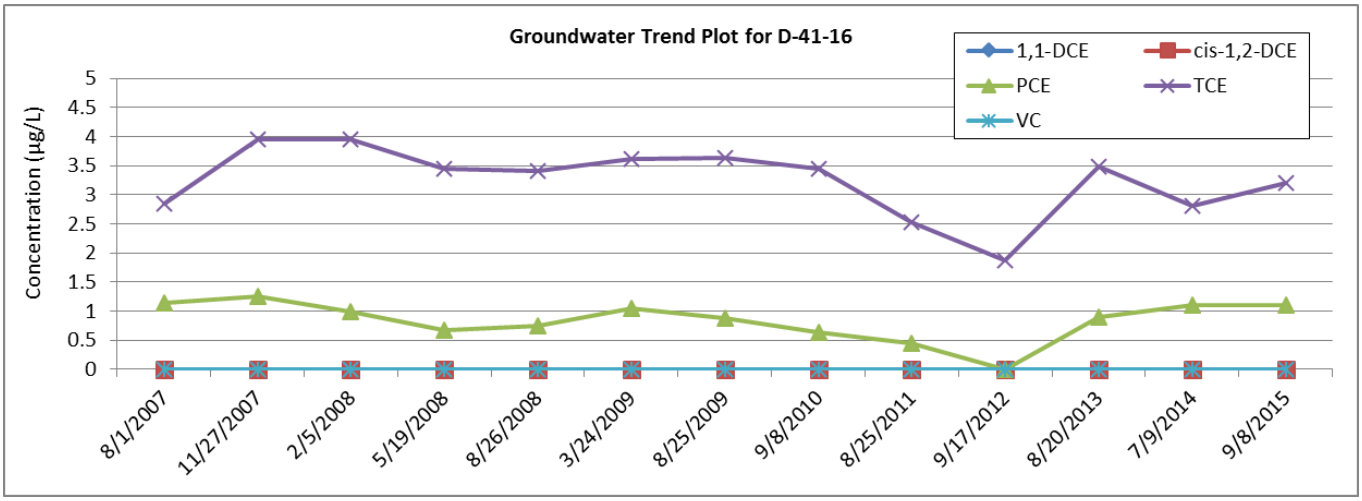
Analyte	7/9/2014	9/8/2015
1,1-Dichloroethene	2.61	2.5
cis-1,2-Dichloroethene	567	409
Tetrachloroethene	0	0
Trichloroethene	144	225
Vinyl chloride	0	8.3

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



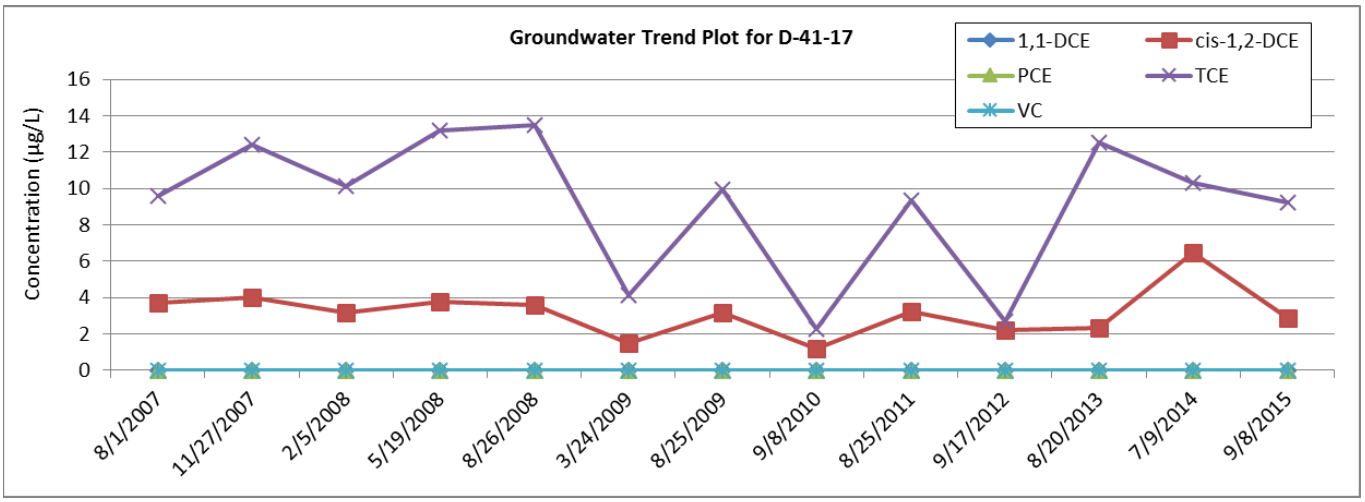
Analyte	2/26/2003	7/24/2003	1/29/2004	7/19/2004	2/2/2005	7/13/2005	2/2/2006	9/22/2006	2/12/2007	3/5/2007	8/6/2007
1,1-Dichloroethene	0	0	0	0	0	0	0	7.33	0	0	7.57
cis-1,2-Dichloroethene	1.5	4.2	8.7	5.3	32	30	58	303	275	5.58	1440
Tetrachloroethene	6.1	12	35	2.5	31	34	38	93.2	74.8	3.11	28.9
Trichloroethene	130	240	570	40	630	470	1400	4220	4090	110	1980
Vinyl chloride	0	0	0	0	0	0	0	4.34	0	0	90.7

Analyte	11/27/2007	2/4/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	2.93	4.26	24.8	3.67	1.92	0	0	0.403	2.85	19	1.2
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0.652	1.64	15.1	0.831	11.5	0.378	0.652	0	0	0.563	1.8
Vinyl chloride	0	1.06	0.697	0	1.01	0	0	0	0	0.431	1.05	0

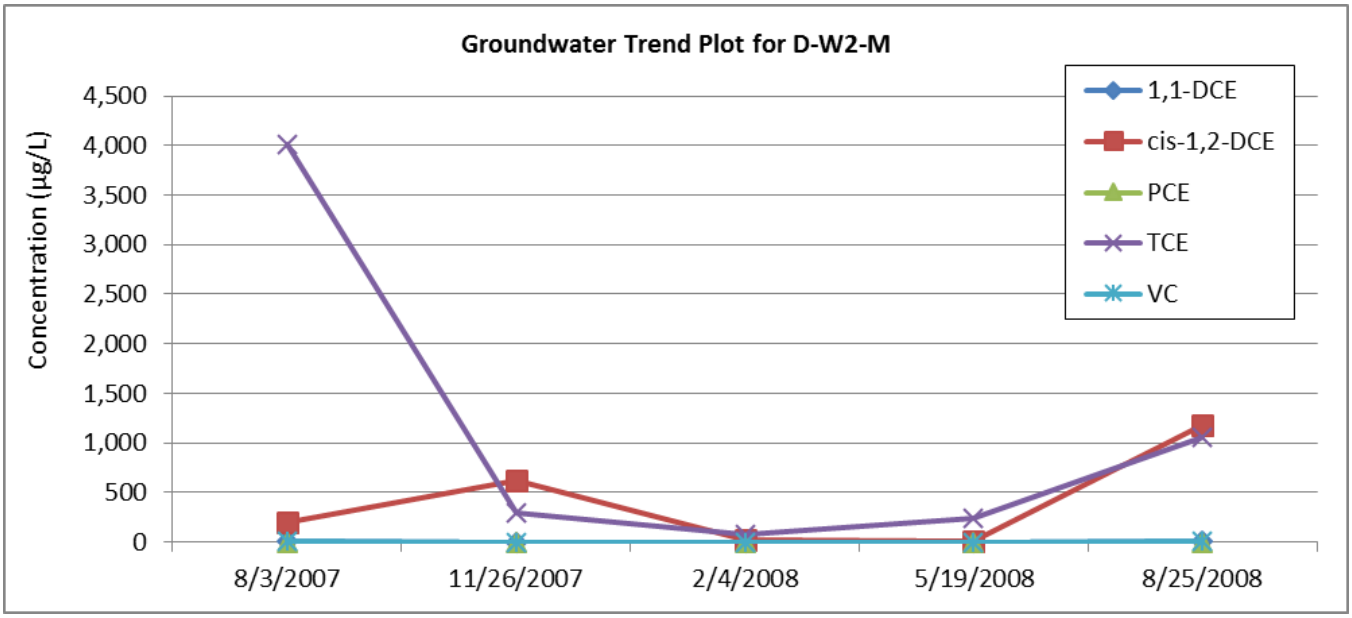


Analyte	8/1/2007	11/27/2007	2/5/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	1.14	1.26	0.999	0.665	0.75	1.05	0.885	0.63	0.443	0	0.891	1.1	1.1
Trichloroethene	2.85	3.95	3.95	3.44	3.41	3.61	3.63	3.44	2.52	1.88	3.49	2.81	3.2
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey

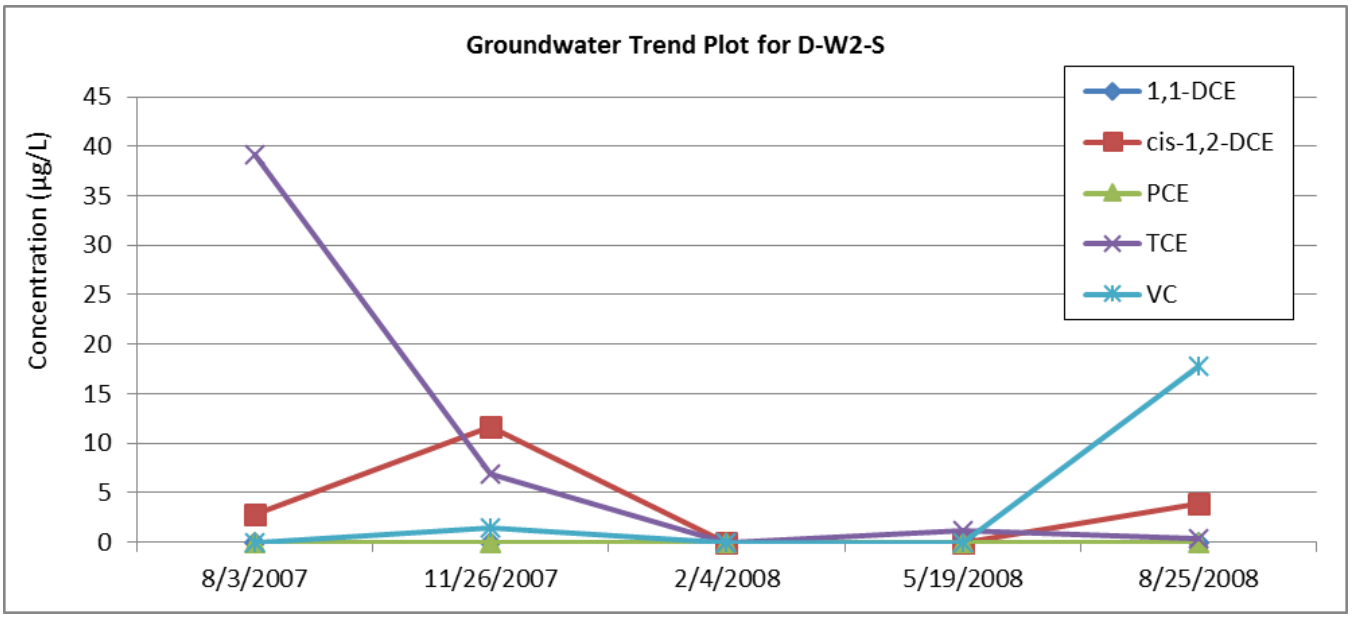


Analyte	8/1/2007	11/27/2007	2/5/2008	5/19/2008	8/26/2008	3/24/2009	8/25/2009	9/8/2010	8/25/2011	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	3.71	4	3.19	3.76	3.62	1.48	3.15	1.18	3.22	2.19	2.36	6.48	2.9
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	9.58	12.4	10.1	13.2	13.5	4.11	9.93	2.29	9.37	2.7	12.5	10.3	9.2
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0	0

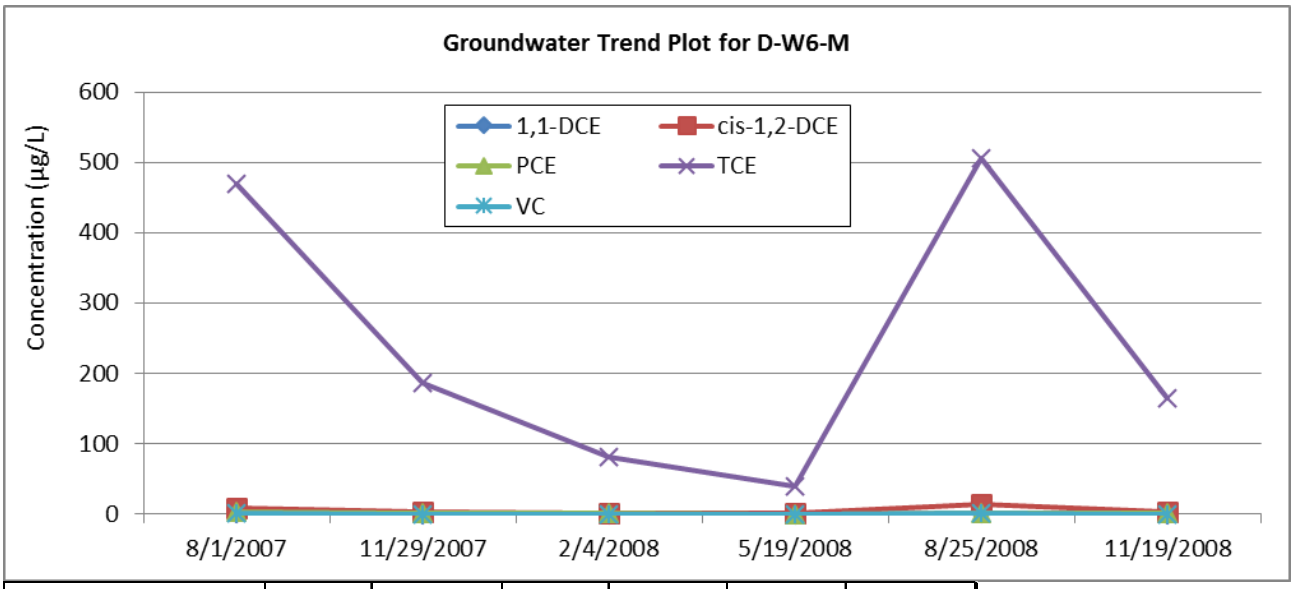


Analyte	8/3/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008
1,1-Dichloroethene	5.39	0	0	0	5.44
cis-1,2-Dichloroethene	194	615	15.3	12.7	1180
Tetrachloroethene	0	0	0	0	0
Trichloroethene	4010	289	76.7	242	1060
Vinyl chloride	3.7	0	0	0.358	8.58

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey

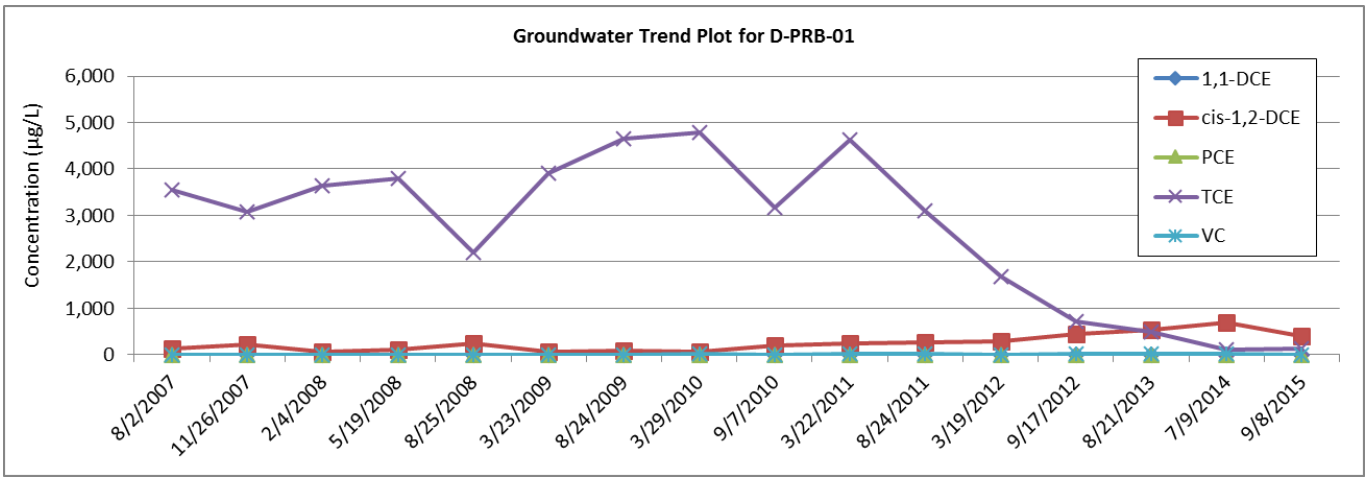


Analyte	8/3/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	2.79	11.7	0	0	3.9
Tetrachloroethene	0	0	0	0	0
Trichloroethene	39.2	6.91	0	1.13	0.3
Vinyl chloride	0	1.5	0	0	17.8



Analyte	8/1/2007	11/29/2007	2/4/2008	5/19/2008	8/25/2008	11/19/2008
1,1-Dichloroethene	0.875	0	0	0	0.92	0
cis-1,2-Dichloroethene	7.92	2.81	1.19	1.68	13.9	3.5
Tetrachloroethene	3.4	0.761	0.36	0	1.65	0.46
Trichloroethene	470	186	81.5	38.6	505	164
Vinyl chloride	1.51	0	0	0	1.41	0

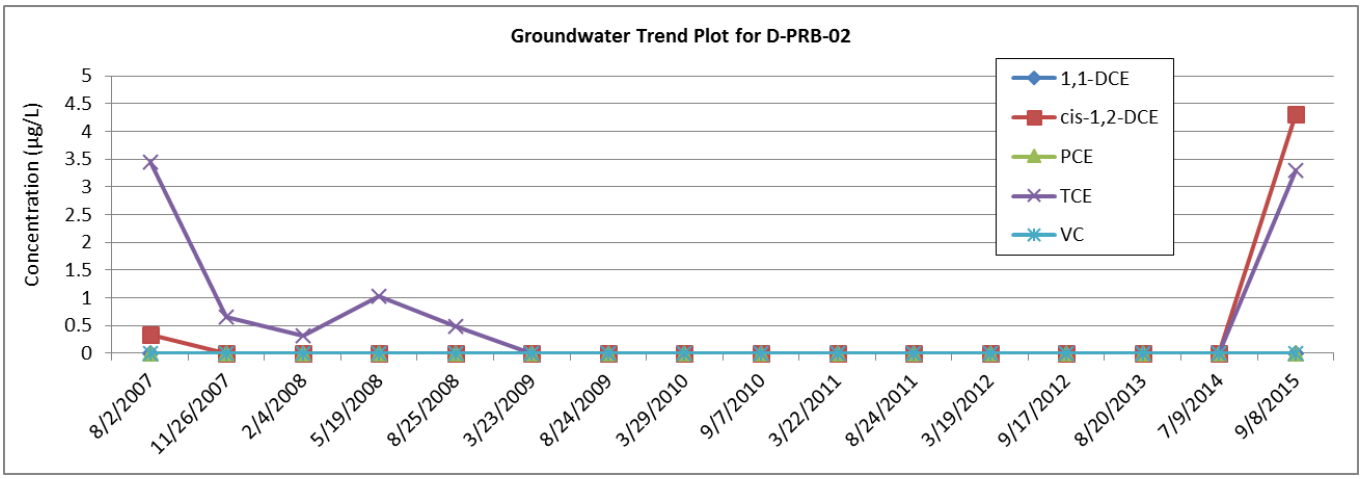
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	3.8	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	134	214	69.3	108	240	68.2	84.1	64	190	237	262
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	3560	3080	3650	3800	2200	3910	4660	4780	3160	4620	3090
Vinyl chloride	3.33	0	0	0	0	5.94	5.73	16.8	8.32	17.6	18.5

Analyte	3/19/2012	9/17/2012	8/21/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	2.43	0
cis-1,2-Dichloroethene	294	449	538	703	392
Tetrachloroethene	0	0	0	0	0
Trichloroethene	1680	722	486	116	137
Vinyl chloride	5.81	11.2	11.4	11.3	4.7

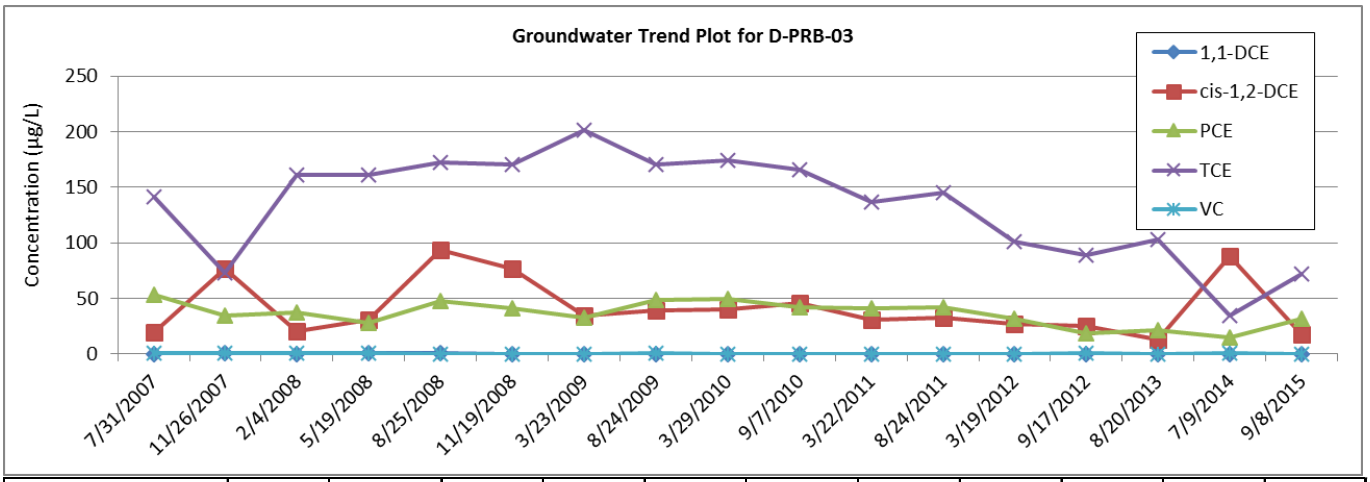
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.327	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	3.44	0.653	0.321	1.02	0.483	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	4.3
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	3.3
Vinyl chloride	0	0	0	0	0

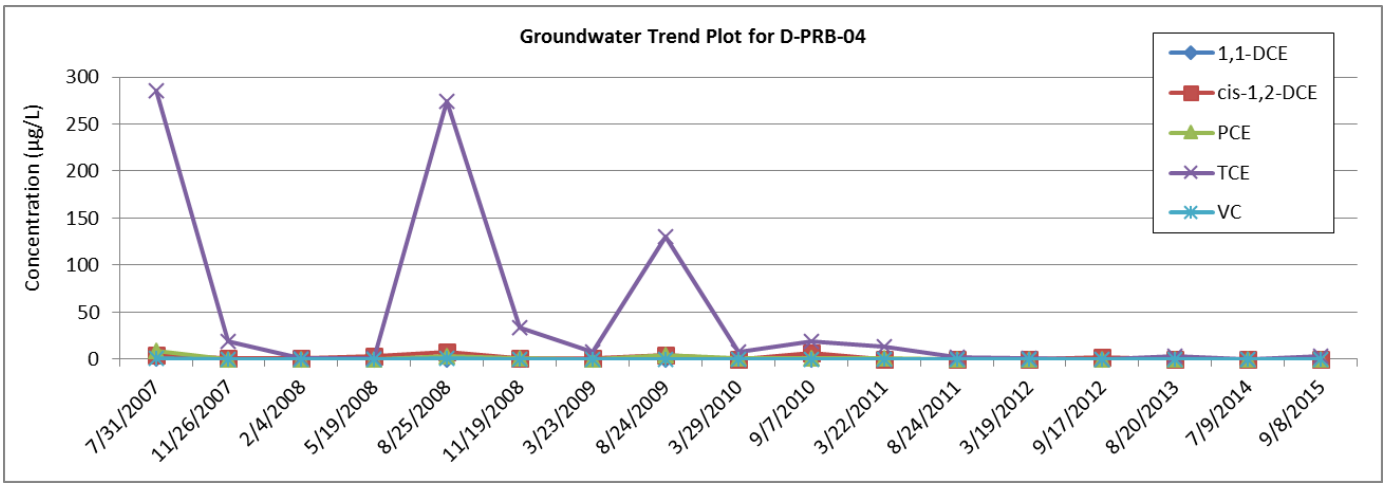
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	7/31/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	11/19/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011
1,1-Dichloroethene	0	0.529	0	0.623	0.554	0	0	0	0	0	0
cis-1,2-Dichloroethene	19.1	76.5	20.4	30.9	93.8	76.3	34.1	38.9	40.5	45.7	31
Tetrachloroethene	53.5	35	36.9	28.1	47.9	40.7	32.3	48.7	49.7	42	41.1
Trichloroethene	141	73.3	161	161	172	170	201	170	174	166	137
Vinyl chloride	0.689	0.929	0.768	1.01	0	0	0	0.7	0	0	0.281

Analyte	8/24/2011	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0
cis-1,2-Dichloroethene	32.8	26.6	24.8	13.1	87.8	18.1
Tetrachloroethene	42.2	31.9	18.8	21.4	15	31.8
Trichloroethene	145	101	88.6	103	34.8	72.4
Vinyl chloride	0	0	0.688	0	0.43	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	7/31/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	11/19/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011
1,1-Dichloroethene	0.641	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	4.56	1.34	0.643	3.16	7.62	1.54	0.783	3.87	0	6.4	0
Tetrachloroethene	8.73	0	0	0	3.63	0.863	0	3.9	1.38	1.13	1.35
Trichloroethene	285	19.2	1.08	1.42	274	34	7.3	130	7.37	19.2	13.2
Vinyl chloride	1.3	0	0	0	0.886	0	0	0.426	0	0	0

Analyte	8/24/2011	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.263	0	2.18	0	0	0
Tetrachloroethene	0	0	0	0	0	0
Trichloroethene	1.62	0.633	0.332	2.73	0	3.8
Vinyl chloride	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
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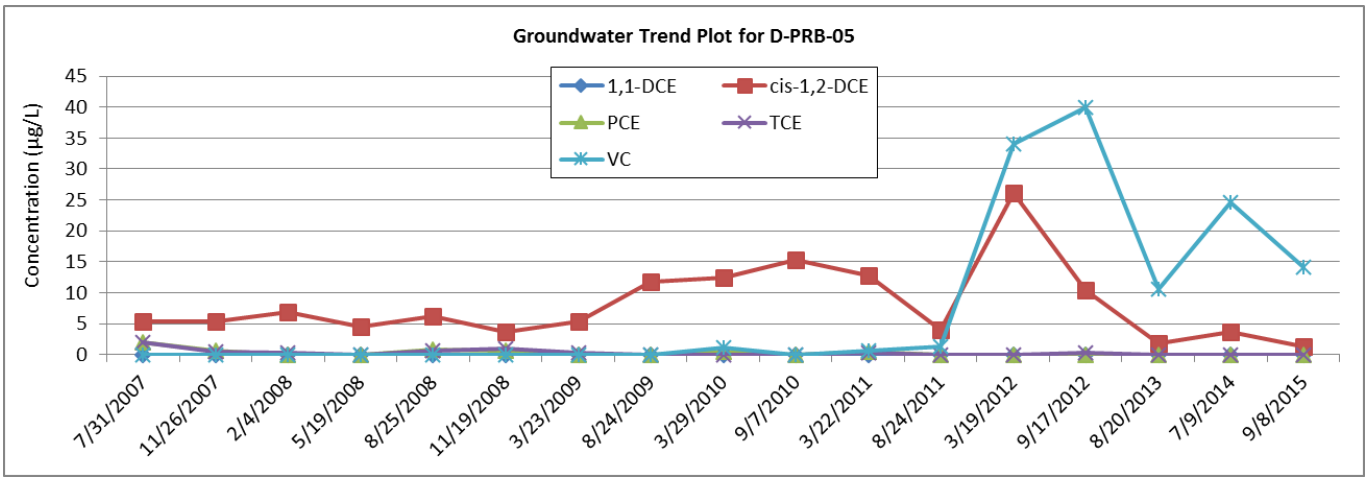

Analyte	7/31/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	11/19/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	5.34	5.44	6.85	4.46	6.25	3.61	5.36	11.8	12.4	15.4	12.8
Tetrachloroethene	2.04	0.639	0	0	0.825	0.669	0	0	0.516	0	0.405
Trichloroethene	2.08	0.507	0.283	0	0.734	0.967	0.303	0	0	0	0.261
Vinyl chloride	0	0	0	0	0	0	0	0	1.08	0	0.694

Analyte	8/24/2011	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0
cis-1,2-Dichloroethene	4.03	26.2	10.5	1.77	3.62	1.3
Tetrachloroethene	0	0	0	0	0	0
Trichloroethene	0	0	0.266	0	0	0
Vinyl chloride	1.3	34	40	10.6	24.6	14.2

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Trend Plots of Selected VOC Data
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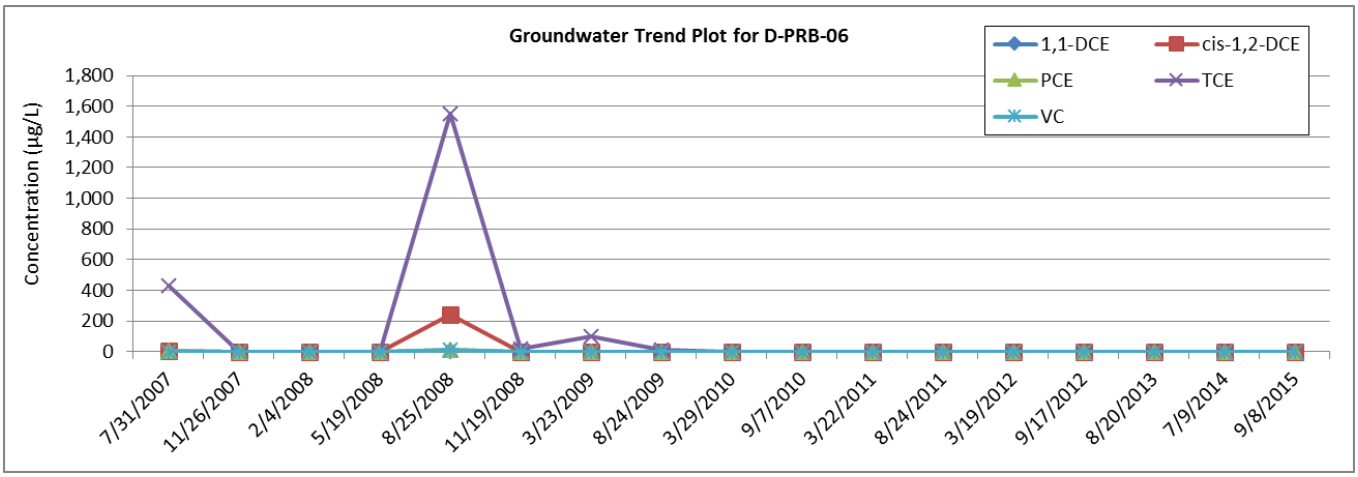
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	7/31/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	11/19/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011
1,1-Dichloroethene	0	0	0	0	4.13	0	0	0	0	0	0
cis-1,2-Dichloroethene	6.95	0	0	0	240	0.62	1.98	1.57	0	0	0
Tetrachloroethene	5.09	0	0	0	12.1	0	0.456	0	0	0	0
Trichloroethene	434	0	0	0	1550	20.8	101	9.67	0	0	0
Vinyl chloride	1.93	0	0	0	10.9	0	0.537	0	0	0	0

Analyte	8/24/2011	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
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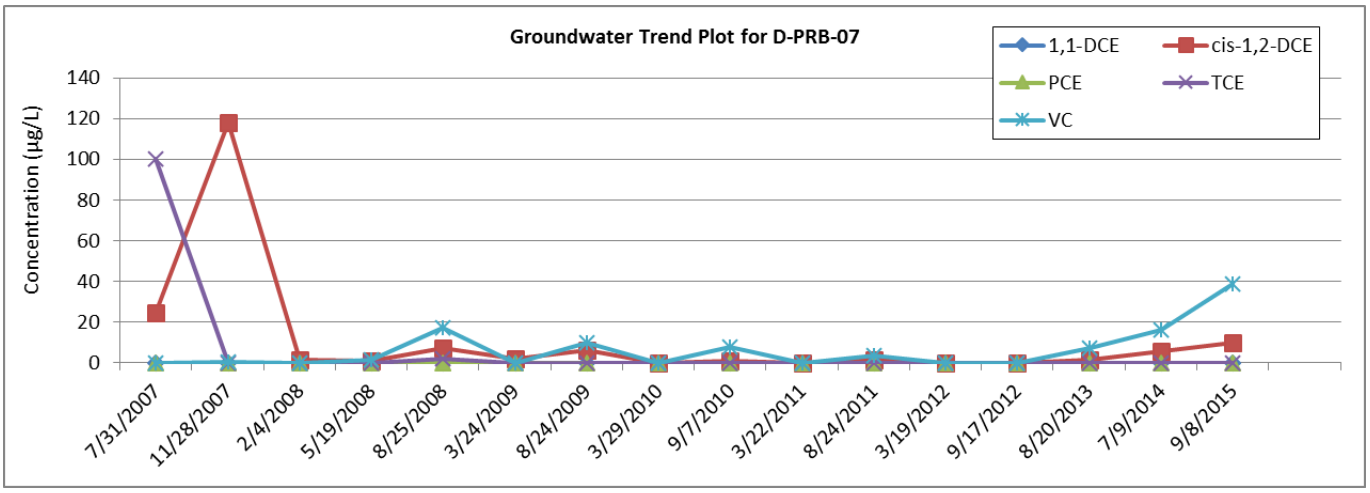

Analyte	7/31/2007	11/28/2007	2/4/2008	5/19/2008	8/25/2008	3/24/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	24.6	118	1.73	1.01	7.14	2.24	6.19	0	1.12	0	1.39
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	99.9	0	0	0	2.16	0	0	0	0	0	0
Vinyl chloride	0	0.551	0	1.39	17.5	0	10.1	0	7.77	0	3.82

Analyte	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	1.59	5.73	10.1
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	0
Vinyl chloride	0	0	7.22	16	38.7

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Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
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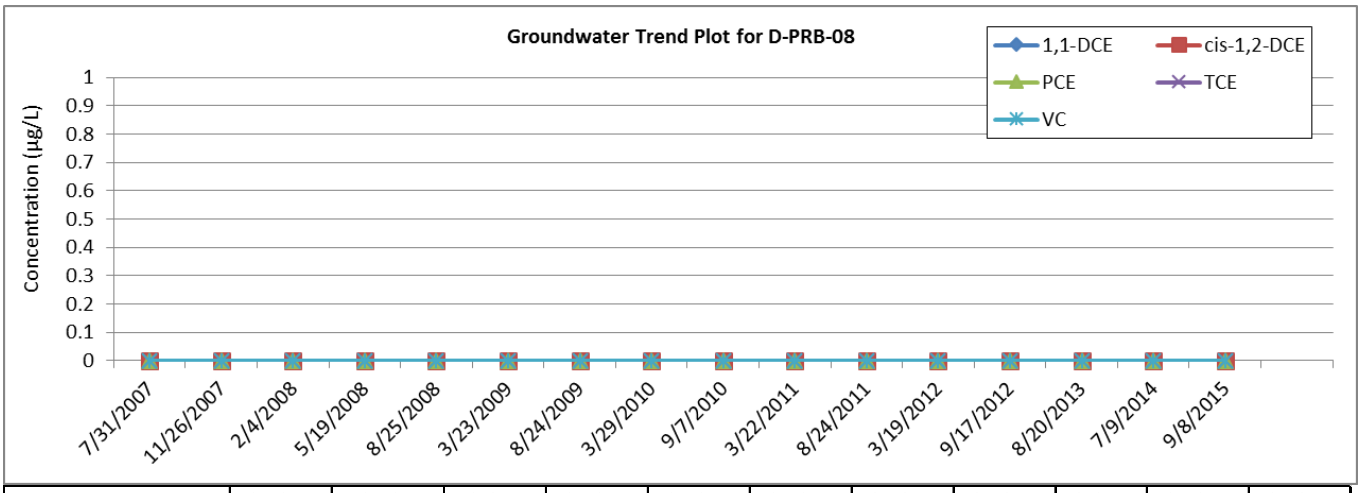
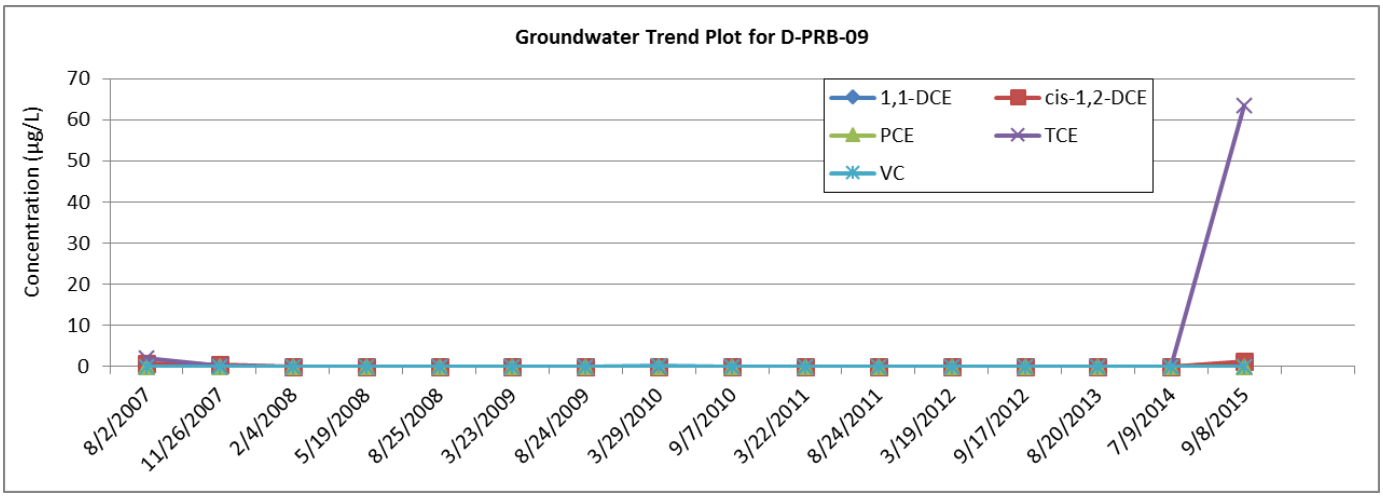


Analyte	7/31/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	0
Vinyl chloride	0	0	0	0	0

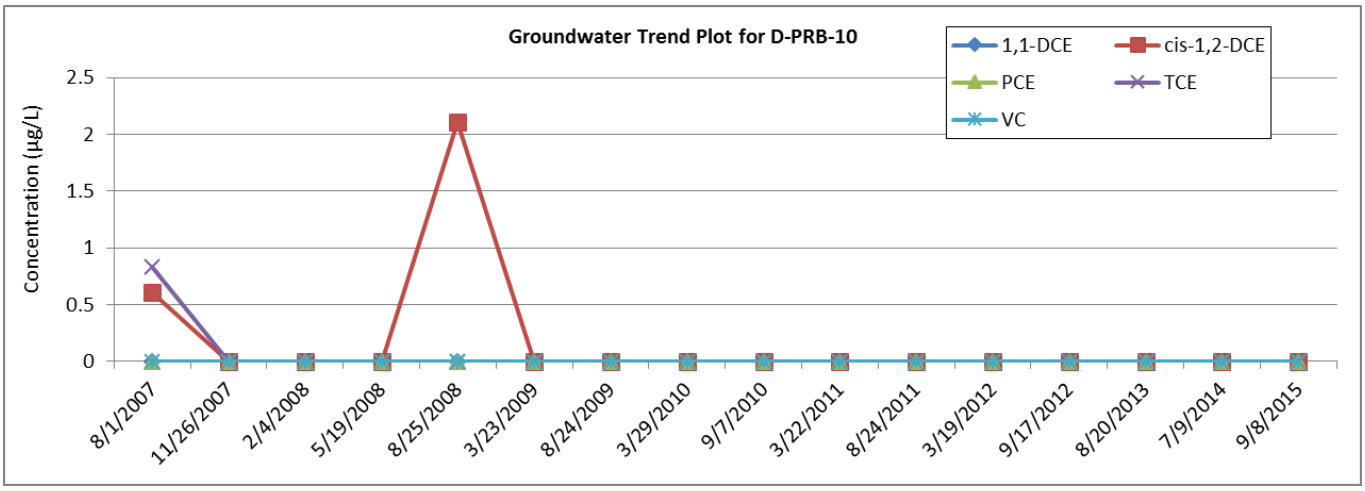
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.688	0.379	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	1.98	0.265	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0.32	0	0	0

Analyte	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0.96
cis-1,2-Dichloroethene	0	0	0	0	1.3
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	63.4
Vinyl chloride	0	0	0	0	0

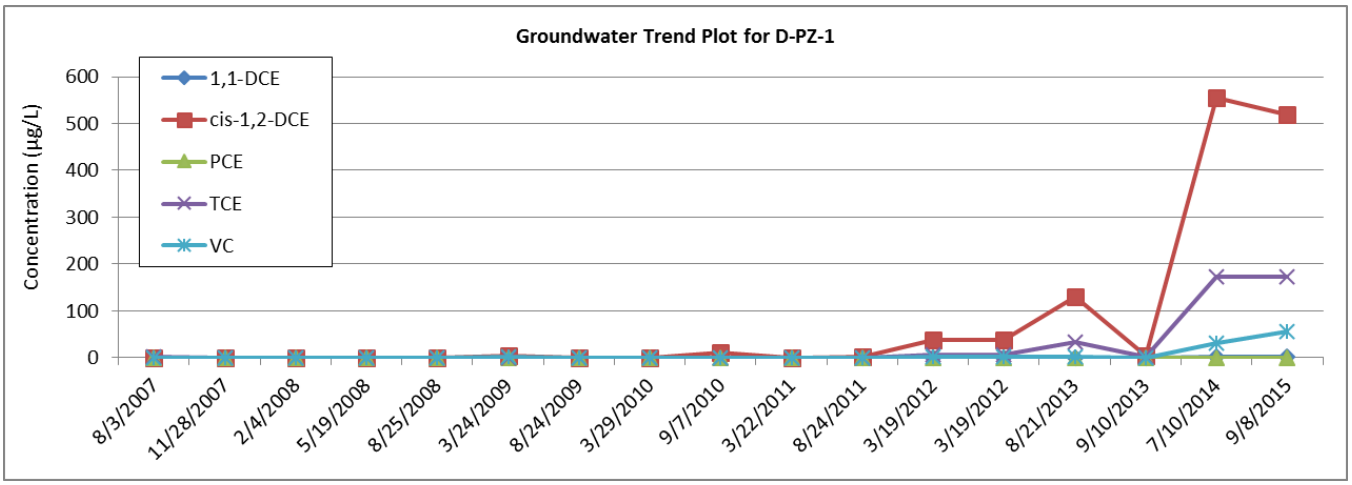
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/1/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.611	0	0	0	2.11	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0.835	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	3/19/2012	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	0
Vinyl chloride	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/3/2007	11/28/2007	2/4/2008	5/19/2008	8/25/2008	3/24/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.379	0	0	0	0	3.55	0	0	10.7	0.36	1.5
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	1.21	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	1.04	0	0	0.36	0	0

Analyte	3/19/2012	3/19/2012	8/21/2013	9/10/2013	7/10/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	2.79	2.9
cis-1,2-Dichloroethene	37.2	37.2	130	3.34	556	519
Tetrachloroethene	0	0	0	0	0	0
Trichloroethene	6.95	6.95	32.8	1.85	173	172
Vinyl chloride	0.897	0.897	2.89	0	30.7	55.2

Table 8-2
Trend Plots of Selected VOC Data
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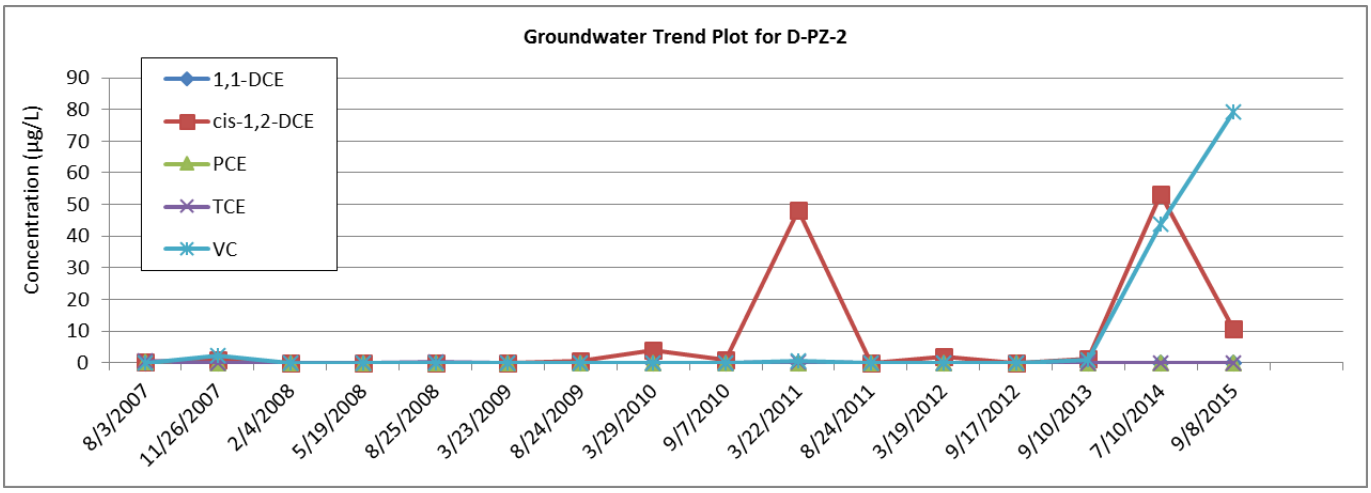
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/3/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011	8/24/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.353	0.887	0	0	0	0	0.609	4.03	1.11	48.3	0
Tetrachloroethene	0.302	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0.552	0	0	0	0.339	0	0	0	0	0.418	0
Vinyl chloride	0	2.18	0	0	0	0	0	0	0	0.752	0

Analyte	3/19/2012	9/17/2012	9/10/2013	7/10/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene	2.11	0	1.19	53.1	10.7
Tetrachloroethene	0	0	0	0	0
Trichloroethene	0	0	0	0	0
Vinyl chloride	0	0	0.824	43.8	79.1

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2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
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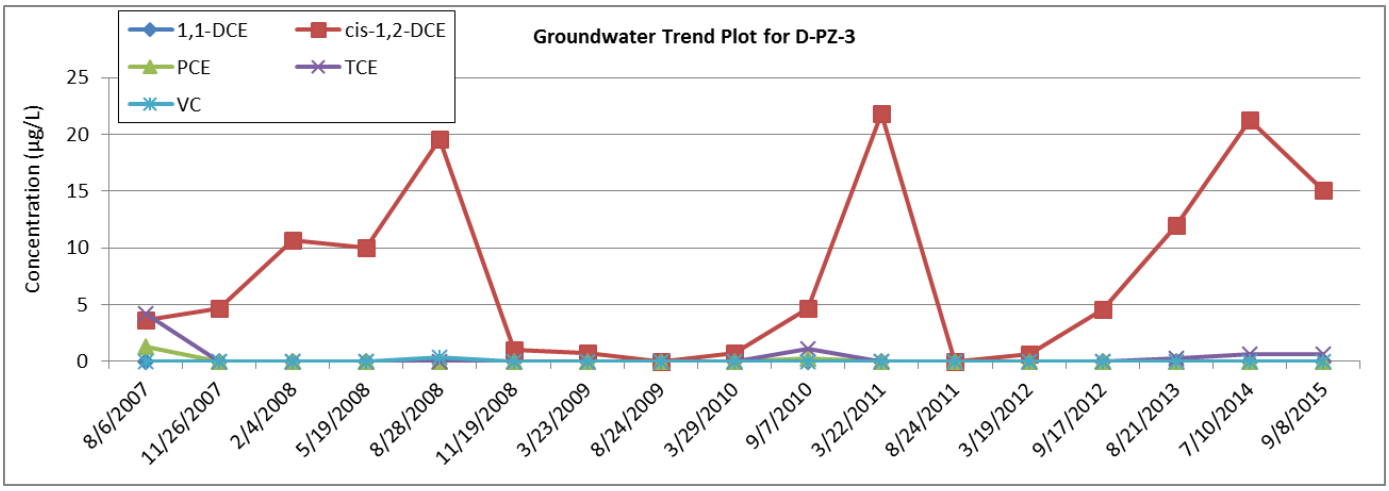

Analyte	8/6/2007	11/26/2007	2/4/2008	5/19/2008	8/28/2008	11/19/2008	3/23/2009	8/24/2009	3/29/2010	9/7/2010	3/22/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	3.62	4.68	10.7	10	19.6	1	0.777	0	0.759	4.69	21.8
Tetrachloroethene	1.31	0	0	0	0	0	0	0	0	0.289	0
Trichloroethene	4.21	0	0	0	0	0	0	0	0	1.16	0
Vinyl chloride	0	0	0	0	0.329	0	0	0	0	0	0

Analyte	8/24/2011	3/19/2012	9/17/2012	8/21/2013	7/10/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0.605	4.55	12	21.3	15.1
Tetrachloroethene	0	0	0	0	0	0
Trichloroethene	0	0	0	0.298	0.649	0.68
Vinyl chloride	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
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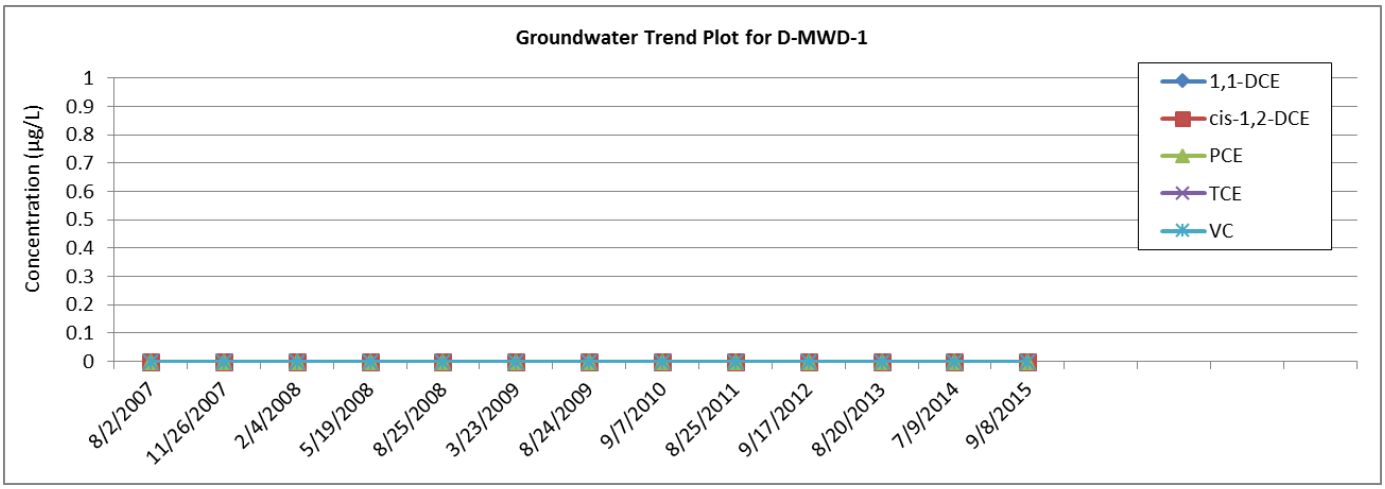
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	9/7/2010	8/25/2011	9/17/2012	8/20/2013
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0
cis-1,2-Dichloroethene	0	0
Tetrachloroethene	0	0
Trichloroethene	0	0
Vinyl chloride	0	0

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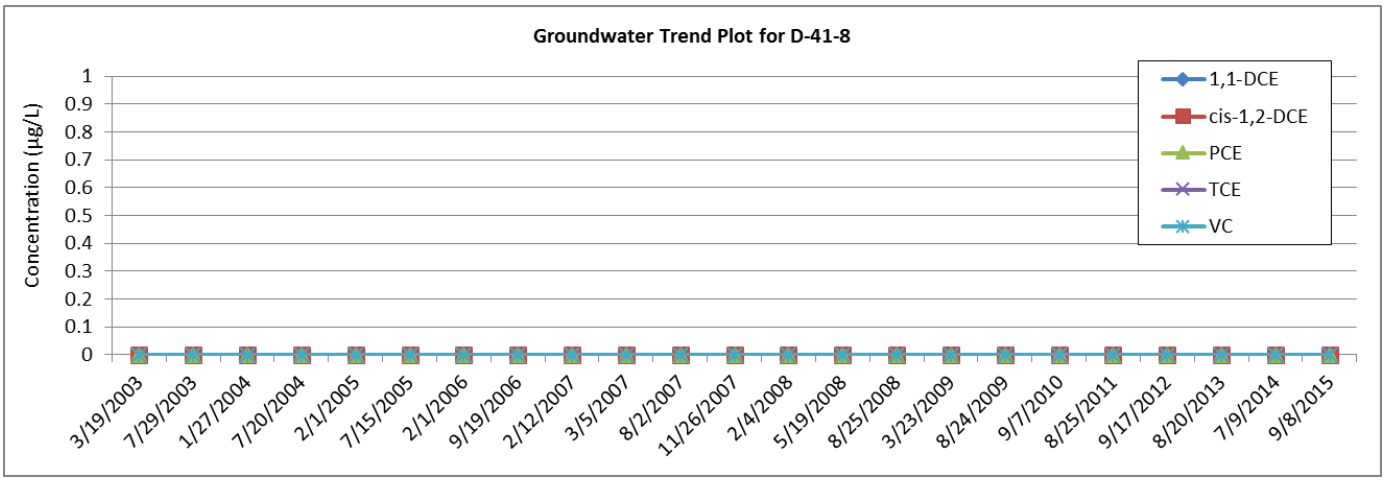
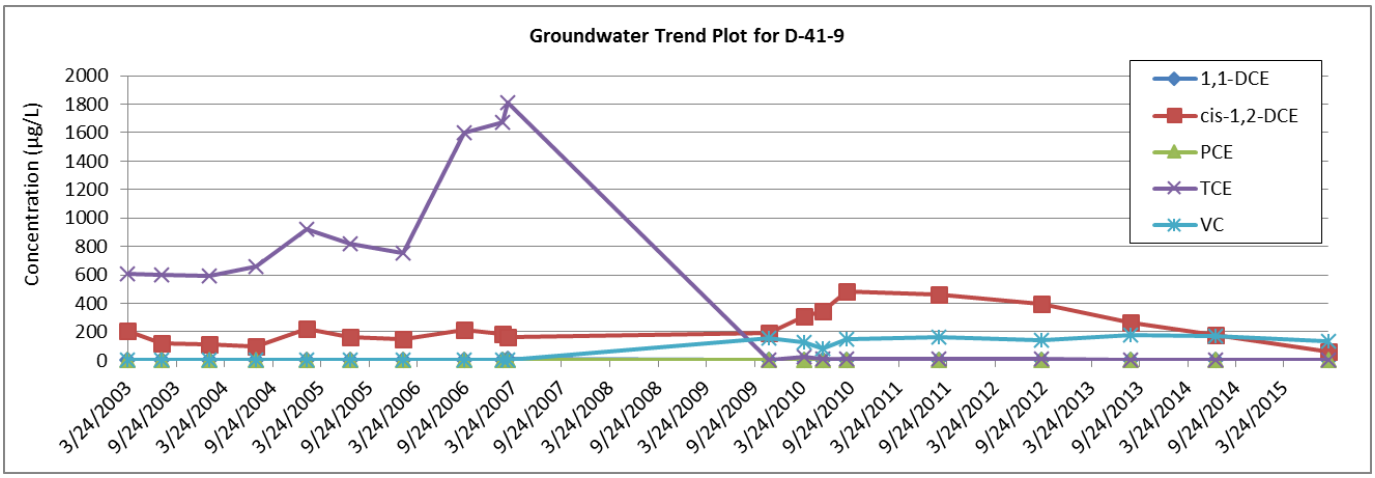
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	3/19/2003	7/29/2003	1/27/2004	7/20/2004	2/1/2005	7/15/2005	2/1/2006	9/19/2006	2/12/2007	3/5/2007	8/2/2007
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	9/7/2010	8/25/2011	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0	0

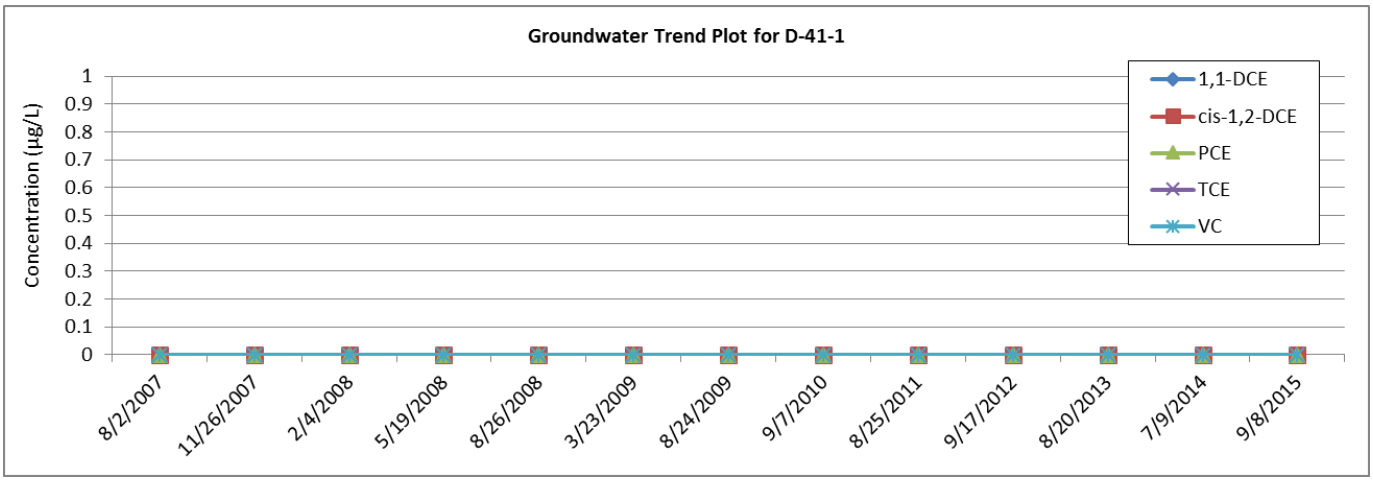
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	3/24/2003	7/29/2003	1/27/2004	7/20/2004	2/1/2005	7/15/2005	2/1/2006	9/19/2006	2/12/2007	3/5/2007	11/17/2009
1,1-Dichloroethene	0	0	0	0	0	0	0	4.63	0	9.32	0
cis-1,2-Dichloroethene	210	120	110	95	220	160	150	214	185	161	195
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	610	600	590	660	920	820	750	1600	1670	1810	4.43
Vinyl chloride	0	0	0	0	0	0	0	5.38	0	3.7	153

Analyte	3/29/2010	6/8/2010	9/7/2010	8/25/2011	9/17/2012	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0.953	0	1.19	1.51	0	0.582	0	0
cis-1,2-Dichloroethene	312	343	485	465	398	268	175	57.5
Tetrachloroethene	0	0	0	0	0	0	0	0
Trichloroethene	22	11.1	8.18	8.13	10.4	2.57	2.27	0.73
Vinyl chloride	128	80.9	151	166	140	175	170	132

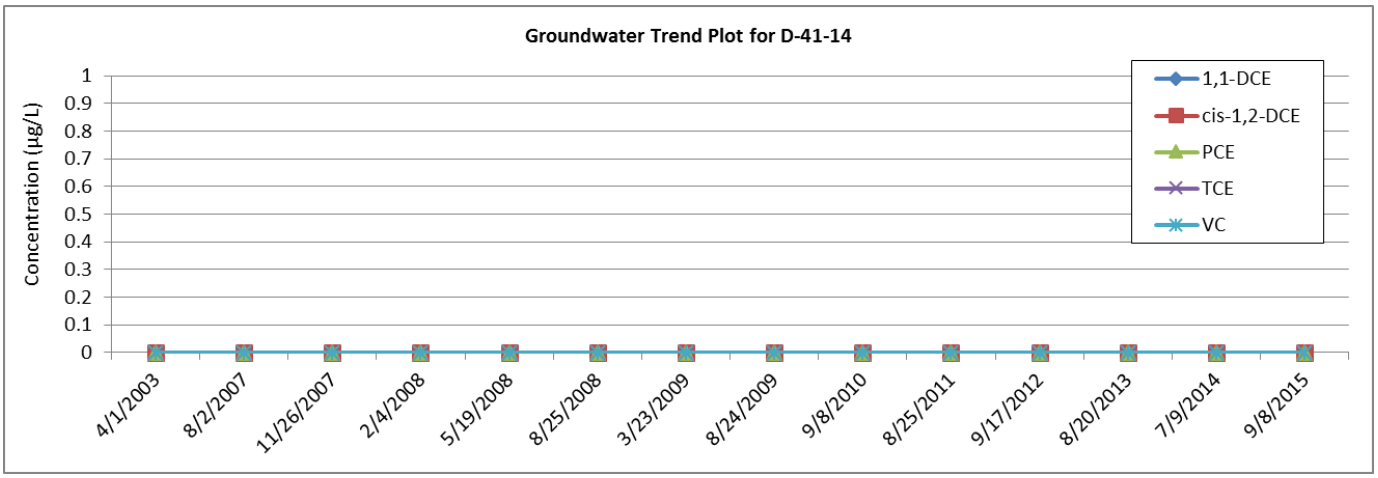
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/26/2008	3/23/2009	8/24/2009	9/7/2010	8/25/2011	9/17/2012	8/20/2013
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0
cis-1,2-Dichloroethene	0	0
Tetrachloroethene	0	0
Trichloroethene	0	0
Vinyl chloride	0	0

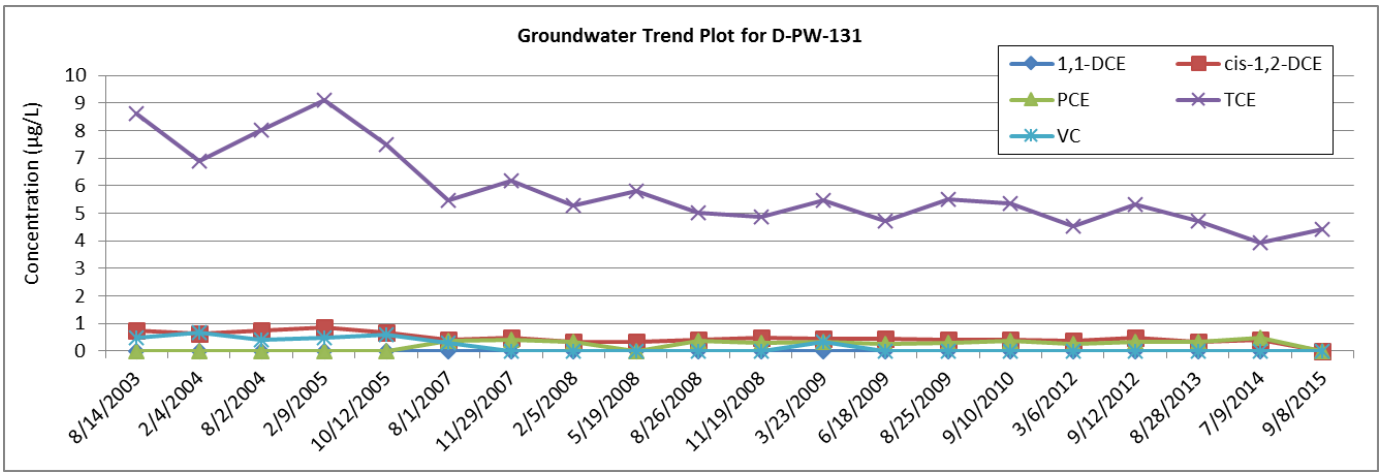
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	4/1/2003	8/2/2007	11/26/2007	2/4/2008	5/19/2008	8/25/2008	3/23/2009	8/24/2009	9/8/2010	8/25/2011	9/17/2012
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	8/20/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0
cis-1,2-Dichloroethene	0	0	0
Tetrachloroethene	0	0	0
Trichloroethene	0	0	0
Vinyl chloride	0	0	0

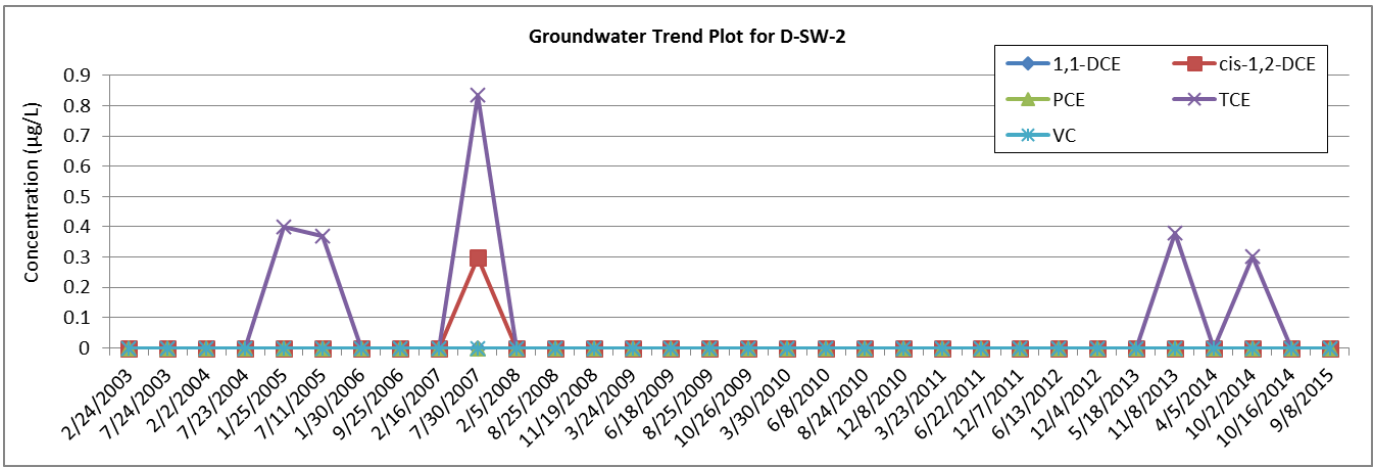
Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	8/14/2003	2/4/2004	8/2/2004	2/9/2005	10/12/2005	8/1/2007	11/29/2007	2/5/2008	5/19/2008	8/26/2008	11/19/2008
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.76	0.65	0.73	0.86	0.68	0.403	0.481	0.333	0.326	0.417	0.467
Tetrachloroethene	0	0	0	0	0	0.359	0.41	0.317	0	0.388	0.295
Trichloroethene	8.6	6.9	8	9.1	7.5	5.45	6.17	5.29	5.81	5.02	4.88
Vinyl chloride	0.48	0.66	0.4	0.47	0.59	0.284	0	0	0	0	0

Analyte	3/23/2009	6/18/2009	8/25/2009	9/10/2010	3/6/2012	9/12/2012	8/28/2013	7/9/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.427	0.442	0.391	0.409	0.379	0.486	0.351	0.404	0
Tetrachloroethene	0.317	0.268	0.297	0.352	0.251	0.319	0.343	0.492	0
Trichloroethene	5.45	4.73	5.5	5.36	4.54	5.32	4.73	3.92	4.4
Vinyl chloride	0.323	0	0	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	2/24/2003	7/24/2003	2/2/2004	7/23/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	7/30/2007	2/5/2008
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0.299	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0.4	0.37	0	0	0	0.836	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	8/25/2008	11/19/2008	3/24/2009	6/18/2009	8/25/2009	10/26/2009	3/30/2010	6/8/2010	8/24/2010	12/8/2010	3/23/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	6/22/2011	12/7/2011	6/13/2012	12/4/2012	5/18/2013	11/8/2013	4/5/2014	10/2/2014	10/16/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0.38	0	0.301	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
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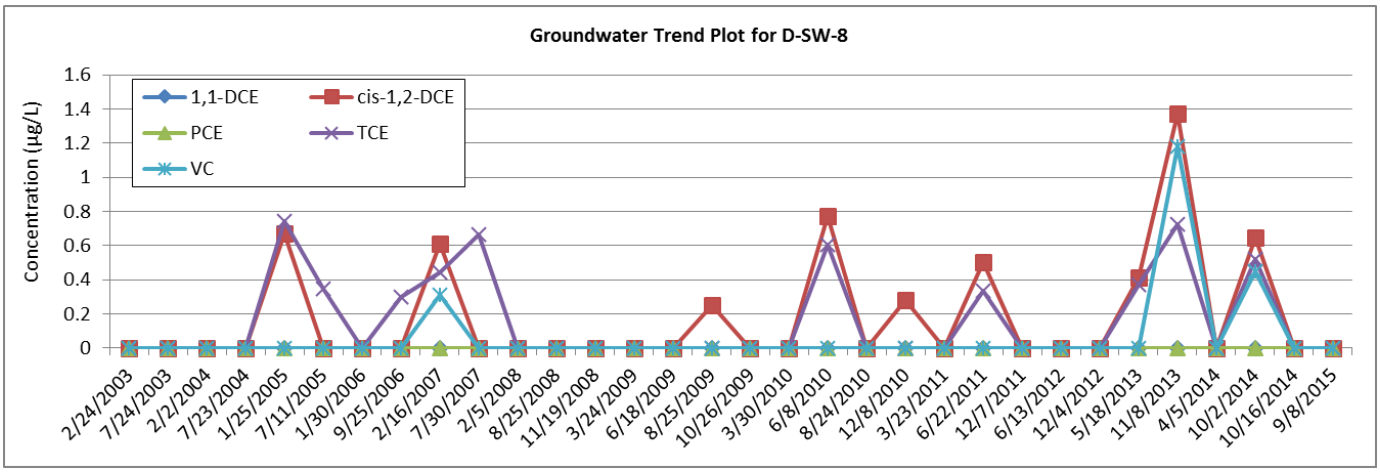

Analyte	2/24/2003	7/24/2003	2/2/2004	7/23/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	7/30/2007	2/5/2008
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0.67	0	0	0	0.613	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0.74	0.35	0	0.297	0.441	0.667	0
Vinyl chloride	0	0	0	0	0	0	0	0	0.311	0	0

Analyte	8/25/2008	11/19/2008	3/24/2009	6/18/2009	8/25/2009	10/26/2009	3/30/2010	6/8/2010	8/24/2010	12/8/2010	3/23/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0	0.251	0	0	0.774	0	0.279	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0.607	0	0	0
Vinyl chloride	0	0	0	0	0	0	0	0	0	0	0

Analyte	6/22/2011	12/7/2011	6/13/2012	12/4/2012	5/18/2013	11/8/2013	4/5/2014	10/2/2014	10/16/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.504	0	0	0	0.411	1.37	0	0.644	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0.333	0	0	0	0.371	0.722	0	0.52	0	0
Vinyl chloride	0	0	0	0	0	1.18	0	0.451	0	0

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
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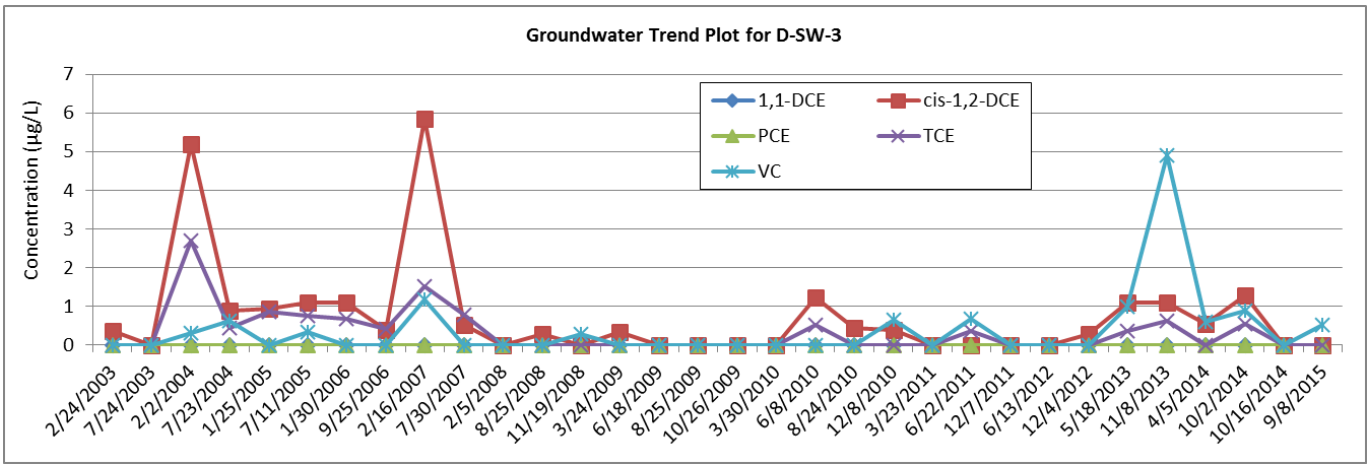
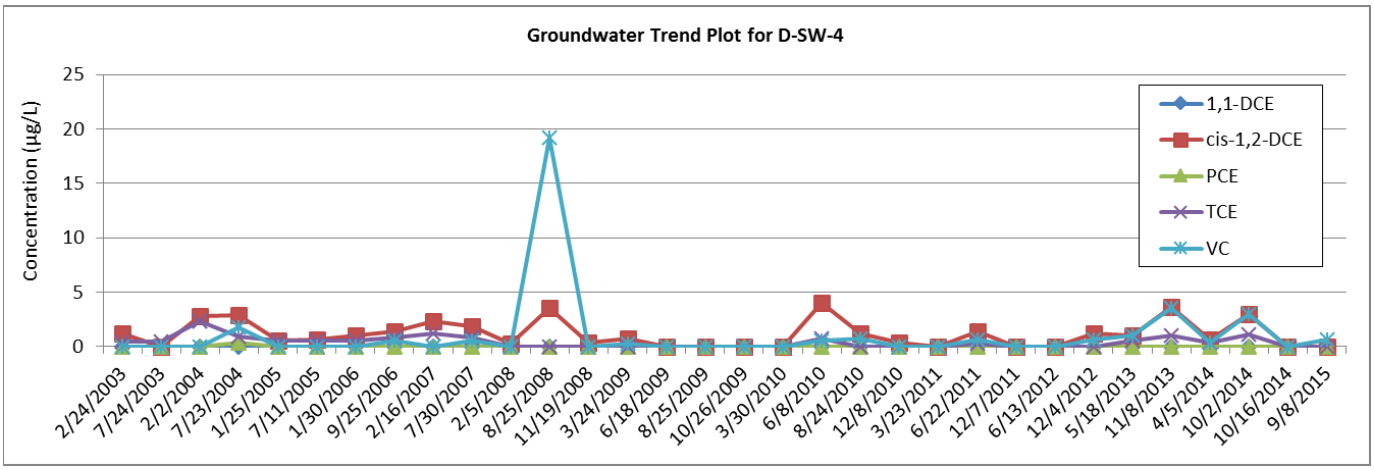


Analyte	2/24/2003	7/24/2003	2/2/2004	7/23/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	7/30/2007	2/5/2008
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.36	0	5.2	0.88	0.93	1.1	1.1	0.392	5.85	0.533	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	2.7	0.43	0.87	0.77	0.69	0.429	1.52	0.772	0
Vinyl chloride	0	0	0.3	0.63	0	0.35	0	0	1.17	0	0

Analyte	8/25/2008	11/19/2008	3/24/2009	6/18/2009	8/25/2009	10/26/2009	3/30/2010	6/8/2010	8/24/2010	12/8/2010	3/23/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0.274	0	0.341	0	0	0	0	1.24	0.455	0.384	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0.511	0	0	0
Vinyl chloride	0	0.278	0	0	0	0	0	0	0	0.66	0

Analyte	6/22/2011	12/7/2011	6/13/2012	12/4/2012	5/18/2013	11/8/2013	4/5/2014	10/2/2014	10/16/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	0	0	0	0.298	1.1	1.1	0.538	1.29	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0.376	0	0	0	0.371	0.614	0	0.548	0	0
Vinyl chloride	0.67	0	0	0	0.999	4.89	0.612	0.888	0	0.53

Table 8-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Area D (PICA-076) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



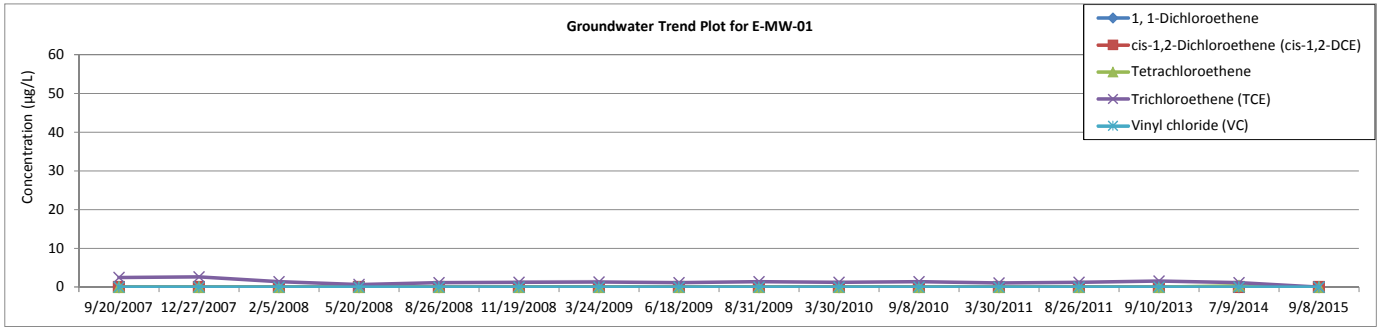
Analyte	2/24/2003	7/24/2003	2/2/2004	7/23/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	7/30/2007	2/5/2008
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	1.2	0	2.8	2.9	0.55	0.68	1	1.44	2.35	1.82	0.268
Tetrachloroethene	0	0	0	0.37	0	0	0	0	0	0	0
Trichloroethene	0.49	0.43	2.3	0.95	0.59	0.56	0.53	0.792	1.19	0.844	0
Vinyl chloride	0	0	0	1.8	0	0	0	0.58	0	0.538	0

Analyte	8/25/2008	11/19/2008	3/24/2009	6/18/2009	8/25/2009	10/26/2009	3/30/2010	6/8/2010	8/24/2010	12/8/2010	3/23/2011
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	3.51	0.327	0.702	0	0	0	0	4.05	1.19	0.397	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	0	0	0	0	0	0.692	0	0	0
Vinyl chloride	19.2	0	0.268	0	0	0	0	0.551	0.78	0	0

Analyte	6/22/2011	12/7/2011	6/13/2012	12/4/2012	5/18/2013	11/8/2013	4/5/2014	10/2/2014	10/16/2014	9/8/2015
1,1-Dichloroethene	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	1.37	0	0	1.18	1.02	3.61	0.623	2.97	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0.313	0	0	0	0.564	1.01	0.391	1.12	0	0
Vinyl chloride	0.62	0	0	0.623	0.979	3.55	0.343	2.95	0	0.66

Table 9-2

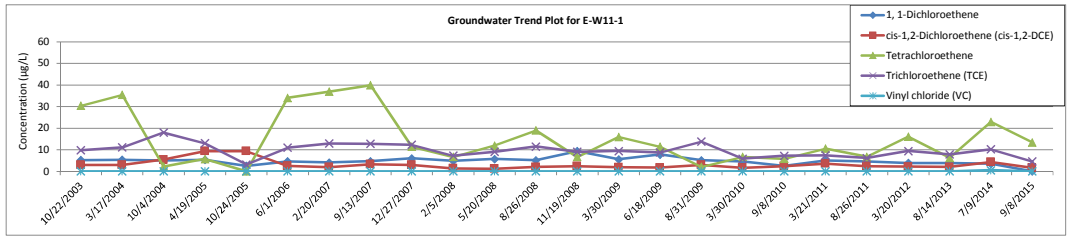
Analyte	9/20/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/30/2011	8/26/2011	9/10/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.306	0
Trichloroethene (TCE)	2.44	2.61	1.43	0.65	1.16	1.25	1.3	1.17	1.36	1.26	1.4	1.09	1.26	1.52	1.14	0
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Analyte	9/20/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/30/2011
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	2.44	2.61	1.43	0.65	1.16	1.25	1.3	1.17	1.36	1.26	1.4	1.09
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Table 9-2

Analyte	10/22/2003	3/17/2004	10/4/2004	4/19/2005	10/24/2005	6/1/2006	2/20/2007	9/13/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	5.15	5.33	5	5.3	2.5	4.6	4.05	4.69	6.03	4.79	5.68	5.14	9.33	5.58	7.8	5.08	4.57	2.43	5.06	4.6	3.81	3.81	3.5	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	2.99	2.93	5.4	9.3	9.3	2.5	1.91	3.26	2.98	1.37	1.2	2	2.35	1.87	1.69	2.95	1.66	2.39	3.55	2.37	2.12	1.99	4.32	1.6
Tetrachloroethene	30.4	35.4	2.2	5.7	0	34	36.9	39.9	11.4	6.63	11.9	19	6.64	15.9	11.4	2.09	6.64	5.79	10.5	6.76	16.1	6.27	22.9	13.4
Trichloroethene (TCE)	9.81	11.1	18	13	3.2	11	12.9	12.7	12.3	7.28	9	11.5	9.05	9.39	8.76	13.8	5.87	7.16	7.4	6.16	9.42	7.88	10.2	4.6
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.548	0

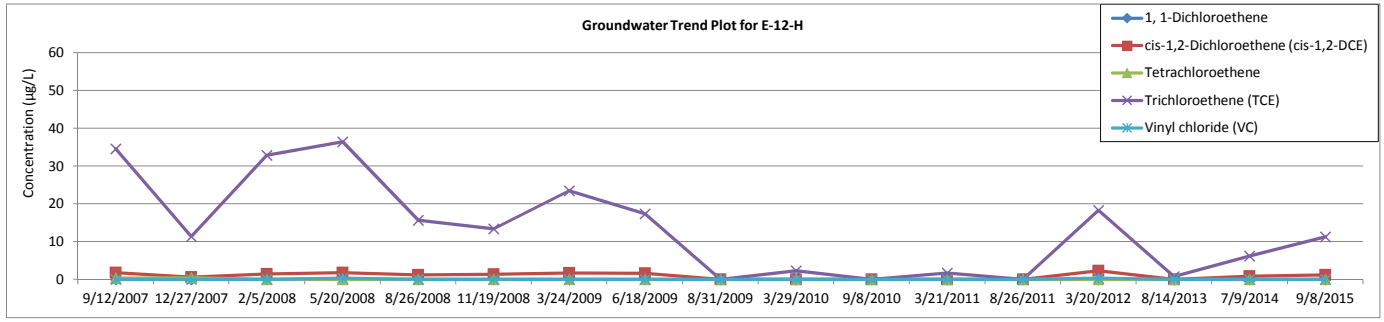


Analyte	10/22/2003	3/17/2004	10/4/2004	4/19/2005	10/24/2005	6/1/2006	2/20/2007	9/13/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008
1, 1-Dichloroethene	5.15	5.33	5	5.3	2.5	4.6	4.05	4.69	6.03	4.79	5.68	5.14
cis-1,2-Dichloroethene (cis-1,2-DCE)	2.99	2.93	5.4	9.3	9.3	2.5	1.91	3.26	2.98	1.37	1.2	2
Tetrachloroethene	30.4	35.4	2.2	5.7	0	34	36.9	39.9	11.4	6.63	11.9	19
Trichloroethene (TCE)	9.81	11.1	18	13	3.2	11	12.9	12.7	12.3	7.28	9	11.5
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	9.33	5.58	7.8	5.08	4.57	2.43	5.06	4.6	3.81	3.81	3.5	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	2.35	1.87	1.69	2.95	1.66	2.39	3.55	2.37	2.12	1.99	4.32	1.6
Tetrachloroethene	6.64	15.9	11.4	2.09	6.64	5.79	10.5	6.76	16.1	6.27	22.9	**13.4**
Trichloroethene (TCE)	9.05	9.39	8.76	13.8	5.87	7.16	7.4	6.16	9.42	7.88	10.2	4.6
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0.548	0

Table 9-2

Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	1.77	0.564	1.4	1.8	1.21	1.35	1.66	1.57	0	0	0	0	0	2.3	0	0.813	1.2
Tetrachloroethene	0.367	0.408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	34.6	11.4	32.9	36.5	15.7	13.4	23.5	17.4	0	2.29	0	1.73	0	18.3	0.724	6.2	11.3
Vinyl chloride (VC)	0	0	0	0.31	0	0	0	0	0	0	0	0	0	0.369	0	0	0

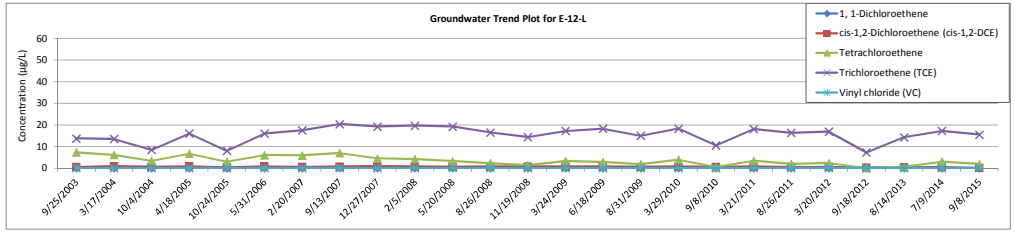


Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	1.77	0.564	1.4	1.8	1.21	1.35	1.66	1.57	0	0	0	0
Tetrachloroethene	0.367	0.408	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	34.6	11.4	32.9	36.5	15.7	13.4	23.5	17.4	0	2.29	0	1.73
Vinyl chloride (VC)	0	0	0	0.31	0	0	0	0	0	0	0	0

Analyte	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	2.3	0	0.813	1.2
Tetrachloroethene	0	0	0	0	0
Trichloroethene (TCE)	0	18.3	0.724	6.2	11.3
Vinyl chloride (VC)	0	0.369	0	0	0

Table 9-2

Analyte	9/25/2003	3/17/2004	10/4/2004	4/18/2005	10/24/2005	5/31/2006	2/20/2007	9/13/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	9/18/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.51	0.88	0.56	0.77	0.33	0.75	0.503	0.699	0.82	0.691	0.593	0.674	0.697	0.685	0.723	0.555	0.668	0.545	0.666	0.452	0.5	0.29	0.362	0.412	0
Tetrachloroethene	7.26	6.13	3.4	6.7	3	6	5.87	7.02	4.57	4.14	3.2	2.23	1.39	3.27	2.86	1.83	3.91	0.586	3.33	1.95	2.36	0	0.555	3	1.9
Trichloroethene (TCE)	13.7	13.5	8.5	16	8	16	17.5	20.4	19.2	19.6	19.2	16.5	14.4	17.2	18.2	15	18.3	10.5	18.1	16.3	16.9	7.27	14.3	17.2	15.5
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

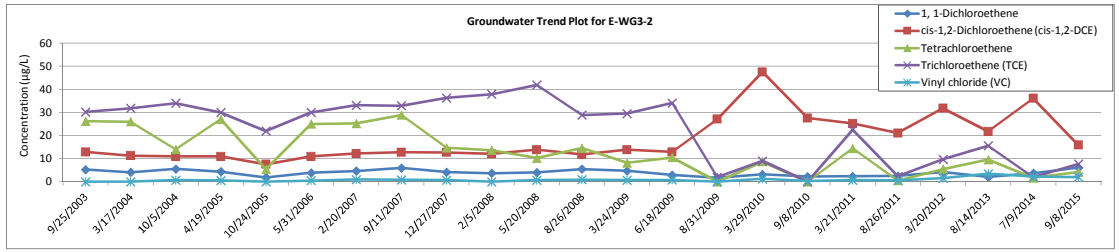


Analyte	9/25/2003	3/17/2004	10/4/2004	4/18/2005	10/24/2005	5/31/2006	2/20/2007	9/13/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.51	0.88	0.56	0.77	0.33	0.75	0.503	0.699	0.82	0.691	0.593	0.674
Tetrachloroethene	7.26	6.13	3.4	6.7	3	6	5.87	7.02	4.57	4.14	3.2	2.23
Trichloroethene (TCE)	13.7	13.5	8.5	16	8	16	17.5	20.4	19.2	19.6	19.2	16.5
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	9/18/2012	8/14/2013	7/9/2014
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.697	0.685	0.723	0.555	0.668	0.545	0.666	0.452	0.5	0.29	0.362	0.412
Tetrachloroethene	1.39	3.27	2.86	1.83	3.91	0.586	3.33	1.95	2.36	0	0.555	3
Trichloroethene (TCE)	14.4	17.2	18.2	15	18.3	10.5	18.1	16.3	16.9	7.27	14.3	17.2
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Table 9-2

Analyte	9/25/2003	3/17/2004	10/5/2004	4/19/2005	10/24/2005	5/31/2006	2/20/2007	9/11/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	5.3	4.09	5.6	4.4	1.9	3.9	4.66	5.97	4.15	3.71	4.07	5.47	4.73	2.94	1.73	3.19	2.23	2.35	2.49	4.21	2.08	3.7	6.1
cis-1,2-Dichloroethene (cis-1,2-DCE)	12.9	11.3	11	11	7.6	11	12.2	12.8	12.7	12.1	13.9	11.8	13.9	12.9	27.1	47.5	27.6	25.2	21.1	31.8	21.8	36.1	15.9
Tetrachloroethene	26.2	26	14	27	5.4	25	25.2	28.9	14.7	13.7	10.3	14.6	8.18	10.5	0	8.68	0	14.4	0.533	5.49	9.6	1.69	4.2
Trichloroethene (TCE)	30.2	31.8	34	30	22	30	33.1	32.9	36.3	37.9	41.9	28.9	29.5	34.1	1.94	9.05	0	22.5	2.38	9.73	15.6	2.04	7.7
Vinyl chloride (VC)	0	0	0.7	0.57	0	0.49	1.02	0.868	0.738	0	0.747	0.949	0.716	0.762	0	1.3	0.284	0.685	0.595	1.52	3.47	2.23	2

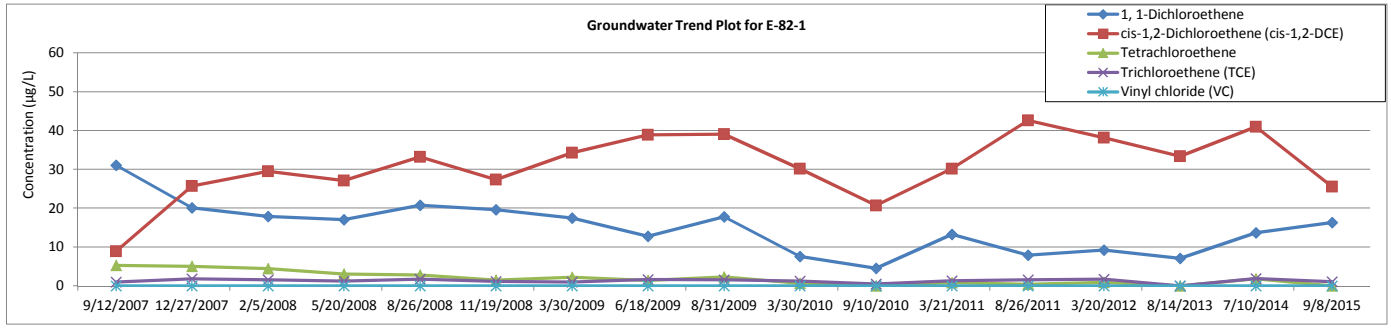


Analyte	9/25/2003	3/17/2004	10/5/2004	4/19/2005	10/24/2005	5/31/2006	2/20/2007	9/11/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008
1, 1-Dichloroethene	5.3	4.09	5.6	4.4	1.9	3.9	4.66	5.97	4.15	3.71	4.07	5.47
cis-1,2-Dichloroethene (cis-1,2-DCE)	12.9	11.3	11	11	7.6	11	12.2	12.8	12.7	12.1	13.9	11.8
Tetrachloroethene	26.2	26	14	27	5.4	25	25.2	28.9	14.7	13.7	10.3	14.6
Trichloroethene (TCE)	30.2	31.8	34	30	22	30	33.1	32.9	36.3	37.9	41.9	28.9
Vinyl chloride (VC)	0	0	0.7	0.57	0	0.49	1.02	0.868	0.738	0	0.747	0.949

Analyte	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	4.73	2.94	1.73	3.19	2.23	2.35	2.49	4.21	2.08	3.7	6.1
cis-1,2-Dichloroethene (cis-1,2-DCE)	13.9	12.9	27.1	47.5	27.6	25.2	21.1	31.8	21.8	36.1	15.9
Tetrachloroethene	8.18	10.5	0	8.68	0	14.4	0.533	5.49	9.6	1.69	4.2
Trichloroethene (TCE)	29.5	34.1	1.94	9.05	0	22.5	2.38	9.73	15.6	2.04	7.7
Vinyl chloride (VC)	0.716	0.762	0	1.3	0.284	0.685	0.595	1.52	3.47	2.23	2

Table 9-2

Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/10/2014	9/8/2015
1, 1-Dichloroethene	31.1	20.1	17.9	17.1	20.8	19.6	17.5	12.8	17.8	7.6	4.5	13.3	7.9	9.23	7.13	13.7	16.3
cis-1,2-Dichloroethene (cis-1,2-DCE)	8.93	25.7	29.5	27.1	33.2	27.4	34.3	38.9	39.1	30.2	20.7	30.2	42.6	38.2	33.4	41	25.6
Tetrachloroethene	5.28	5.07	4.44	3.07	2.8	1.51	2.22	1.44	2.29	0.628	0	0.839	0.391	0.906	0	1.79	0
Trichloroethene (TCE)	0.953	1.78	1.54	1.22	1.74	1.13	1.03	1.62	1.54	1.23	0.486	1.36	1.59	1.77	0	1.86	1.1
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

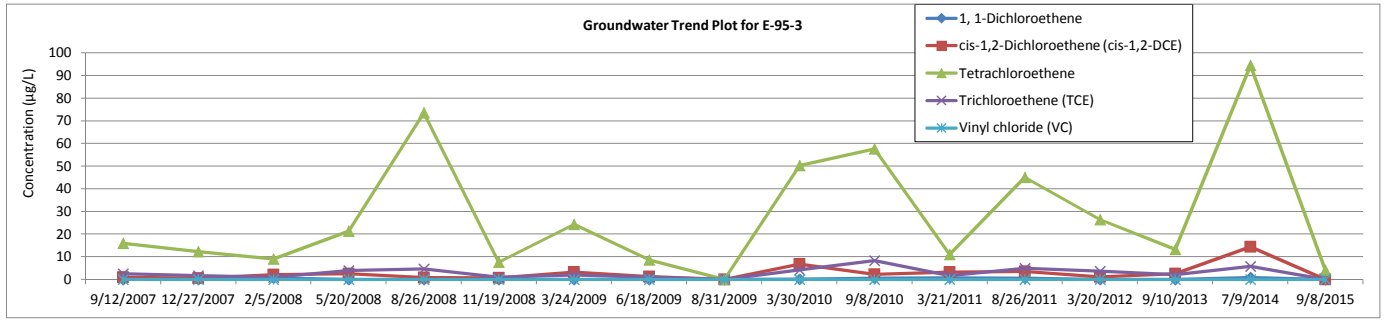


Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011
1, 1-Dichloroethene	31.1	20.1	17.9	17.1	20.8	19.6	17.5	12.8	17.8	7.6	4.5	13.3
cis-1,2-Dichloroethene (cis-1,2-DCE)	8.93	25.7	29.5	27.1	33.2	27.4	34.3	38.9	39.1	30.2	20.7	30.2
Tetrachloroethene	5.28	5.07	4.44	3.07	2.8	1.51	2.22	1.44	2.29	0.628	0	0.839
Trichloroethene (TCE)	0.953	1.78	1.54	1.22	1.74	1.13	1.03	1.62	1.54	1.23	0.486	1.36
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	8/26/2011	3/20/2012	8/14/2013	7/10/2014	9/8/2015
1, 1-Dichloroethene	7.9	9.23	7.13	13.7	16.3
cis-1,2-Dichloroethene (cis-1,2-DCE)	42.6	38.2	33.4	41	25.6
Tetrachloroethene	0.391	0.906	0	1.79	0
Trichloroethene (TCE)	1.59	1.77	0	1.86	1.1
Vinyl chloride (VC)	0	0	0	0	0

Table 9-2

Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	9/10/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0.685	0	0	0	0	0	0	0.077	0.522	0.665	0.509	0	0	0.851	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	1.04	0.515	2.14	2.54	0.846	0.727	3.32	1.24	0	6.77	2.32	3.23	3.48	1.18	2.6	14.4	0
Tetrachloroethene	16	12.3	9.03	21.3	73.6	7.57	24.3	8.56	0	50.3	57.6	11	45.1	26.4	13.3	94.6	4.1
Trichloroethene (TCE)	2.57	1.76	1.02	3.95	4.67	1.05	1.99	1.02	0	4.19	8.4	1.68	4.92	3.61	2.19	5.75	0
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

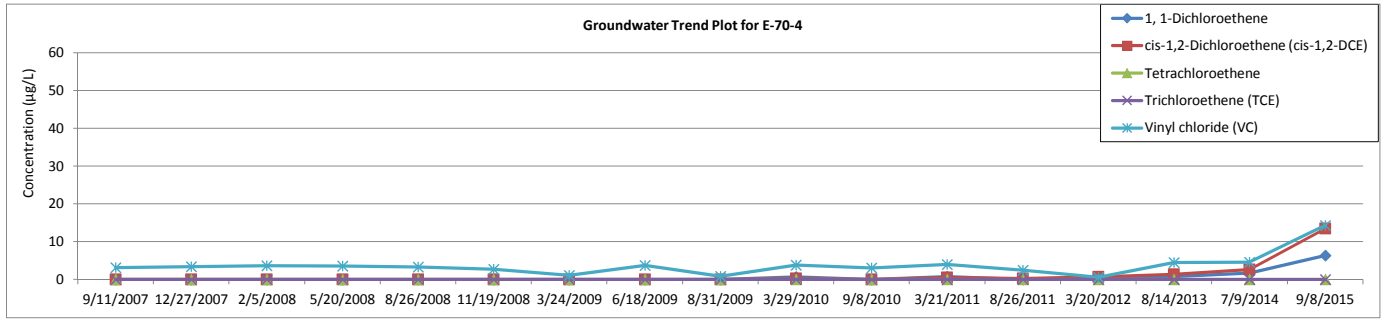


Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/30/2010	9/8/2010	3/21/2011
1, 1-Dichloroethene	0	0	0.685	0	0	0	0	0	0	0.077	0.522	0.665
cis-1,2-Dichloroethene (cis-1,2-DCE)	1.04	0.515	2.14	2.54	0.846	0.727	3.32	1.24	0	6.77	2.32	3.23
Tetrachloroethene	16	12.3	9.03	21.3	73.6	7.57	24.3	8.56	0	50.3	57.6	11
Trichloroethene (TCE)	2.57	1.76	1.02	3.95	4.67	1.05	1.99	1.02	0	4.19	8.4	1.68
Vinyl chloride (VC)	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	8/26/2011	3/20/2012	9/10/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0.509	0	0	0.851	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	3.48	1.18	2.6	14.4	0
Tetrachloroethene	45.1	26.4	13.3	94.6	4.1
Trichloroethene (TCE)	4.92	3.61	2.19	5.75	0
Vinyl chloride (VC)	0	0	0	0	0

Table 9-2

Analyte	9/11/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0.69	0	0.735	0	0.642	0.736	1.7	6.4
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0.29	0	0.47	0.297	0.693	1.35	2.65	13.5
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride (VC)	3.17	3.39	3.65	3.55	3.28	2.68	1.09	3.72	0.872	3.78	3.03	3.96	2.43	0.596	4.51	4.57	14.3

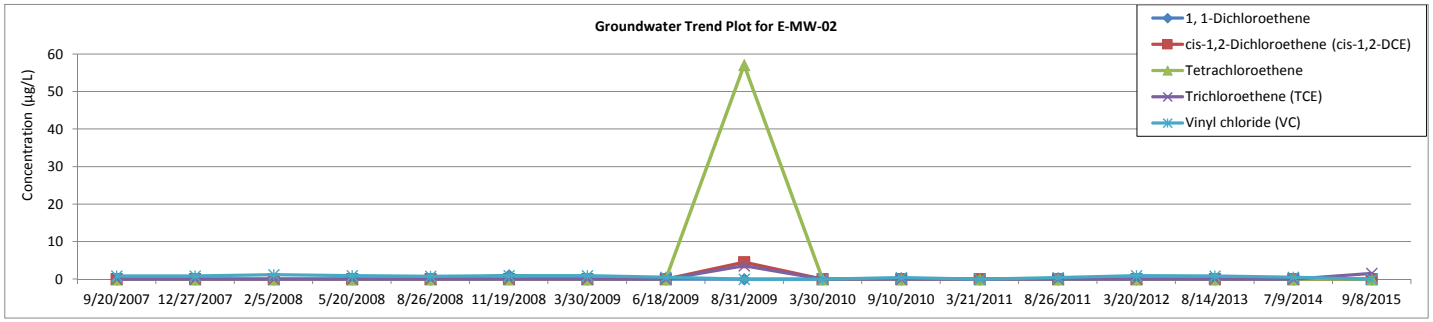


Analyte	9/11/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/24/2009	6/18/2009	8/31/2009	3/29/2010	9/8/2010	3/21/2011
1, 1-Dichloroethene	0	0	0	0	0	0	0	0	0	0.69	0	0.735
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0.29	0	0.47
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride (VC)	3.17	3.39	3.65	3.55	3.28	2.68	1.09	3.72	0.872	3.78	3.03	3.96

Analyte	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0.642	0.736	1.7	6.4
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.297	0.693	1.35	2.65	13.5
Tetrachloroethene	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0
Vinyl chloride (VC)	2.43	0.596	4.51	4.57	14.3

Table 9-2

Analyte	9/20/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0	1.06	0	0	0	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	4.51	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	57.1	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	3.61	0	0	0	0	0	0	0	1.5
Vinyl chloride (VC)	0.819	0.866	1.2	0.936	0.769	0.906	0.969	0.486	0	0	0.456	0	0.447	0.965	0.862	0.533	0

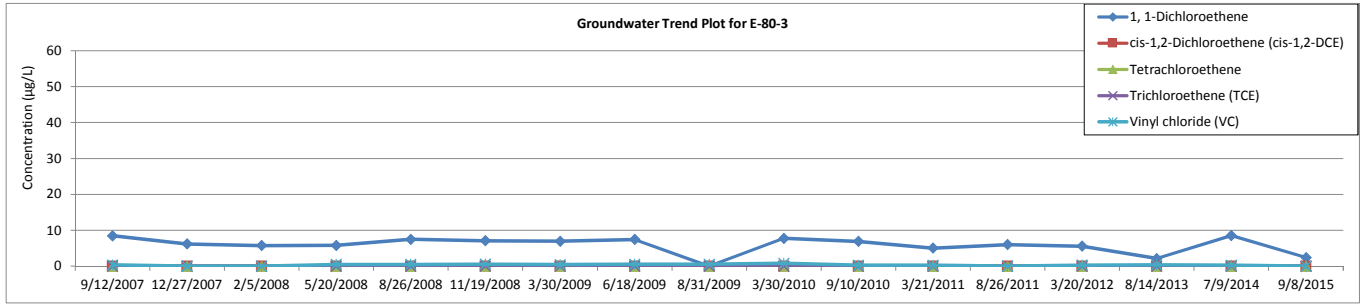


Analyte	9/20/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011
1, 1-Dichloroethene	0	0	0	0	0	1.06	0	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	4.51	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	57.1	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	3.61	0	0	0
Vinyl chloride (VC)	0.819	0.866	1.2	0.936	0.769	0.906	0.969	0.486	0	0	0.456	0

Analyte	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	0	0	0	0	0
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	1.5
Vinyl chloride (VC)	0.447	0.965	0.862	0.533	0

Table 9-2

Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011	8/26/2011	3/20/2012	8/14/2013	7/9/2014	9/8/2015
1, 1-Dichloroethene	8.46	6.18	5.75	5.81	7.47	7.09	6.96	7.43	0	7.73	6.9	5.01	6	5.55	2.15	8.55	2.4
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride (VC)	0.371	0	0	0.465	0.502	0.568	0.458	0.545	0.543	0.811	0.262	0.28	0	0.321	0.41	0.259	0



Analyte	9/12/2007	12/27/2007	2/5/2008	5/20/2008	8/26/2008	11/19/2008	3/30/2009	6/18/2009	8/31/2009	3/30/2010	9/10/2010	3/21/2011
1, 1-Dichloroethene	8.46	6.18	5.75	5.81	7.47	7.09	6.96	7.43	0	7.73	6.9	5.01
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene (TCE)	0	0	0	0	0	0	0	0	0	0	0	0
Vinyl chloride (VC)	0.371	0	0	0.465	0.502	0.568	0.458	0.545	0.543	0.811	0.262	0.28

Analyte	8/26/2011	3/20/2012	8/14/2013	7/9/2014
1, 1-Dichloroethene	6	5.55	2.15	8.55
cis-1,2-Dichloroethene (cis-1,2-DCE)	0	0	0	0
Tetrachloroethene	0	0	0	0
Trichloroethene (TCE)	0	0	0	0
Vinyl chloride (VC)	0	0.321	0.41	0.259

Table 11-2: Summary of Contaminants of Concern
Annual Surface Water and Sediment Monitoring Report
Green Pond Brook/Bear Swamp Brook (PICA-193)
Picatinny Arsenal, New Jersey

Media	Region	Area of Concern	Contaminant of Concern	Remediation Goals[2]
Sediment	Reference	No COCs were identified for sediment in Reference Areas		
	2	Sediments in Area G, near the swale that drains Sites 52, 95 and 96 into Green Pond Brook	benz(a)anthracene	2,200 ug/kg
			fluoranthene	4,000 ug/kg
			phenanthrene	5,400 ug/kg
			pyrene	3,800 ug/kg
			Aroclor 1260	2,000 ug/kg
			4,4'-DDD	200 ug/kg
			4,4'-DDE	200 ug/kg
			4,4'-DDT	200 ug/kg
		Sediments in Green Pond Brook near Site 101 in Area G	arsenic	22 mg/kg
			copper	260.8 mg/kg
			lead	2,500 mg/kg
			zinc	456 mg/kg
	3	Bear Swamp Brook sediments in Area D, including the sediment retention ponds[1]	cadmium	34 mg/kg
			chromium	247 mg/kg
			copper	260.8 mg/kg
			benz(a)anthracene	2,200 ug/kg
			fluoranthene	4,000 ug/kg
			phenanthrene	5,400 ug/kg
			pyrene	3,800 ug/kg
			Aroclor 1248	2,000 ug/kg
			Aroclor 1254	2,000 ug/kg
			4,4'-DDE	200 ug/kg
			4,4'-DDT	200 ug/kg
		Bear Swamp Brook sediments in Area H	mercury	13.2 mg/kg
			4,4'-DDE	200 ug/kg
		Bear Swamp Brook sediments at the oil/water separator pond	cadmium	34 mg/kg
			chromium	247 mg/kg
			copper	260.8 mg/kg
			Aroclor 1260	2,000 ug/kg
			4,4'-DDE	200 ug/kg
	4	Green Pond Brook sediments adjacent to the Burning Ground in Area A	copper	260.8 mg/kg
Surface Water		No COCs were identified for surface water in any Region		

Notes:

AOC = area of concern

COC = contaminant of concern

Analyte identified as COC for other AOCs within Region 3 (denotes maximum concentration in all Region 3 sediment).

Remediation Goals (RGs) were established for all COCs based on the Potential Effect Levels (PELs) calculated in the *Focus Feasibility Study* (IT 2001) and the *Site 31/101 Former Defense Reutilization and Marketing Office* (DRMO) *and Former Gas Station* (PICA-072) *Feasibility Study* and documented in the *Remedial Action Report* (ARCADIS 2008).

Table 11-3: Reference Values
Annual Surface Water and Sediment Monitoring Report
Green Pond Brook/Bear Swamp Brook (PICA-193)
Picatinny Arsenal, New Jersey

Final Habitat Assessment Reference Values

Habitat Score	Value
Optimal	160 - 200
Sub-optimal	110 - 159
Marginal	60 - 109
Poor	< 60

New Jersey High Gradient Macroinvertebrate Index (HGMI)

Biological Condition	Index Score	Regulatory Threshold
Excellent	63 - 100	Full Attainment
Good	< 63 - 42	Full Attainment
Fair	< 42 - 21	Non-Attainment
Poor	< 21	Non-Attainment

Hilsenhoff Biotic Index - Tolerance Values

Modified Family Biotic Index	Water Quality	Degree of Organic Pollution
0 - 3.5	Excellent	Organic pollution unlikely
3.51 - 4.5	Very Good	Possible slight organic pollution
4.51 - 5.5	Good	Some organic pollution probable
5.51 - 6.5	Fair	Fairly substantial pollution likely
6.51 - 7.5	Fairly Poor	Substantial pollution likely
7.51 - 8.5	Poor	Very substantial pollution likely
8.51 - 10	Very Poor	Severe organic pollution likely

Table 14-2: Monitoring Program Summary

				Calendar Year	2013				2014				2015				2016			
				Operation Year	Fifth Year		Sixth Year				Seventh Year				Eighth Year				Ninth Year	
					Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Category	Media	Schedule	Sample Locations	Analyte	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Performance Monitoring	Groundwater	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	20/24IW-3 20/24IW-10[1] 20/24MW-6 20/24MW-6B 20/24MW-8 20/24MW-15 20/24MW-16 20/24MW-17 20/24MW-18[1]	Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethene Vinyl Chloride Total Organic Carbon Methane Ethane Ethene			Completed			Completed					Completed				Planned	
Surface Water Monitoring	Surface Water	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	SW-1 SW-2 SW-3 SW-4 SW-5	Total Organic Carbon Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethene Vinyl Chloride			Completed			Completed					Completed				Planned	
Annual Groundwater Monitoring	Groundwater	Annually until 2011, thereafter 5 year review	20/24IW-1B 20/24IW-2B 20/24IW-3B 20/24IW-08 20/24IW-09 20/24IW-10 20/24MW-18	Tetrachloroethene Trichloroethene 1,1-Dichloroethene Vinyl Chloride			Completed			Completed					Completed				Planned	

Notes:

[1]added to semi-annual program starting First Quarter 2012

Table 16-2
Trigger Levels

Chemical[a]	Trigger Level (in µg/L[b])
VOCs	
Vinyl chloride	6.6
Inorganics	
Arsenic	49.6
Lead	50[c]

Notes:

a. Only analytes that remained in the LTM program after completion of the fourth statistical evaluation are shown in this table.

b. µg/L = micrograms per liter.

c. Because the maximum lead concentration detected, 320 µg/L, is more than 60 times the ARAR, the trigger value was established at 10 times the ARAR.

Table 16-3
2014 LTM Sampling Schedule

Well ID	Vinyl Chloride	Arsenic	Lead
SB1-1	Annual	Annual	Annual
SB1-2	Annual	Annual	Annual
SB1-3	Annual	Annual	Semi-annual
SB1-5	Annual	Annual	Annual
SB1-6	Annual	Annual	Annual
SB1-7	Annual	Annual	Annual
SB2-1A	Annual	Annual	Annual
SB2-2	Annual	Semi-annual	Annual
SB2-3	Annual	Annual	Annual
SB3-1B	Annual	Annual	Annual
SB3-2	Annual	Annual	Annual
SB3-3	Annual	Annual	Annual
SB4-1	Annual	Annual	Annual
SB4-2	Annual	Annual	Annual
SB4-3	Annual	Annual	Annual
SB4-4	Annual	Annual	Annual
MW-17[a]			Annual
MW25-8		Annual	
DM19-1	Semi-annual	Semi-annual	
DM19-2		Annual	
DM25-2	Annual	Annual	
1181-3		Annual	
MW180-1		Annual	
C1-B		Annual	
MW25-6A[b]	Semi-annual	Semi-annual	Annual

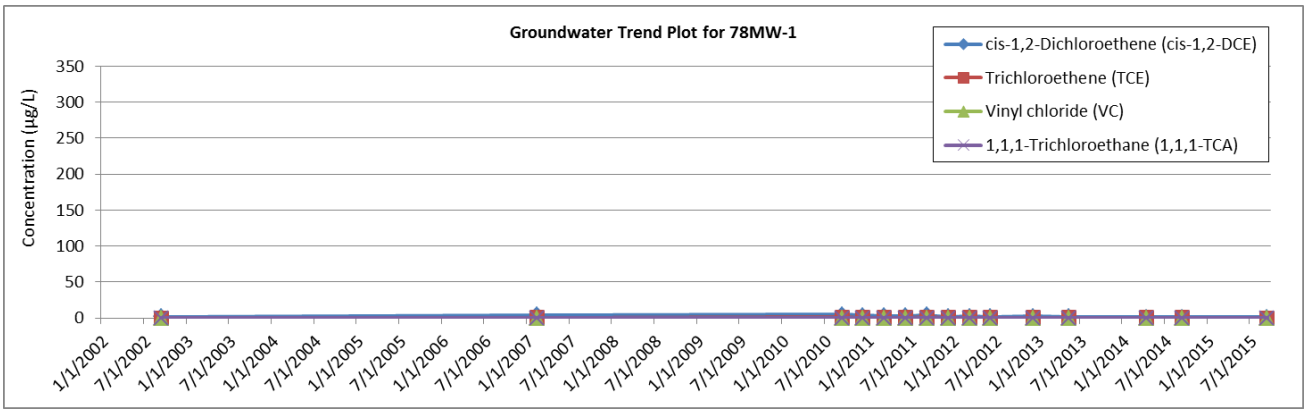
Table 17-2: *In Situ* Enhanced Biodegradation Monitoring Program Summary

Category	Analytical Parameters	Sampling Frequency	Monitoring Wells
Performance Monitoring[1]			
Biogeochemical parameters, dissolved gasses	pH temperature specific conductance	Years 1 – 7: semi-annually	2MW-5[4] 2MW-4D 2MW-10 2MW-14 2MW-17[5] 2MW-25 2MW-26 2MW-27 2MW47-101 2MW47-102
	methane ethene ethane	Years 1 – 7: semi-annually	
	dissolved organic carbon	Years 1 – 7: semi-annually	
	nitrate dissolved iron sulfate volatile fatty acids	As Needed Basis	
Compliance Groundwater/Surface Water Monitoring			
Chlorinated volatile organic compounds	carbon tetrachloride[2] chloroform chloromethane methylene chloride tetrachloroethylene[2] trichloroethylene[2] cis-1,2-dichloroethylene 1,1-dichloroethene[2] vinyl chloride	Year 1-2: quarterly Years 3 – 4: semi-annually Year 5 - Year 30: annually	2MW-5[4] 2MW-10 2MW-14 2MW-17 2MW-25 2MW-26 2MW-27 2MW-4D 2MW47-101 2MW47-102
			2SW-16[3] 2SW-20[3] 2SW-29[3] 2SW-36[3] 2SW-39[3]

Notes:

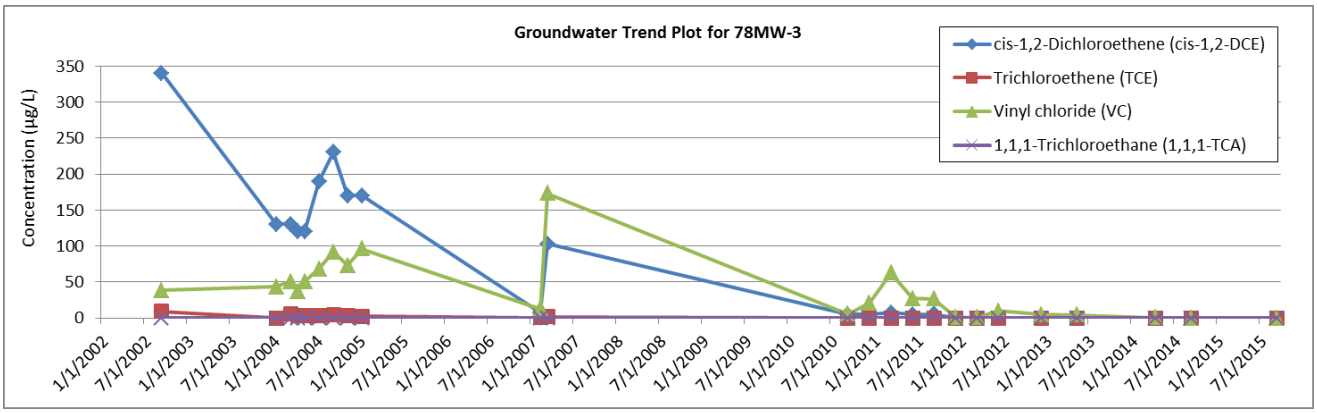
1. The groundwater monitoring program may be modified over time based on performance monitoring results and with United States Environmental Protection Agency concurrence.
2. Contaminant of concern as identified in the 2010 Record of Decision.
3. Surface water samples will be collected annually from the approximate locations shown in Figure 3.
4. 2MW-5 could not be located and was not sampled in 2015.

Table 20-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Site 78 (PICA-013) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	9/26/2002	2/27/2007	9/27/2010	12/22/2010	3/17/2011	6/20/2011	9/27/2011	12/19/2011	3/20/2012	6/25/2012	12/17/2012
cis-1,2-DCE	70	1.5	4.23	4.45	3.58	2.77	3.04	4.41	1.38	2.25	1.72	2.04
TCE	1	0	0.669	0.787	0.697	0.516	0.528	0.752	0.305	0.518	0.373	0.696
VC	1	0	0	0	0	0	0	0	0	0	0	0
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0

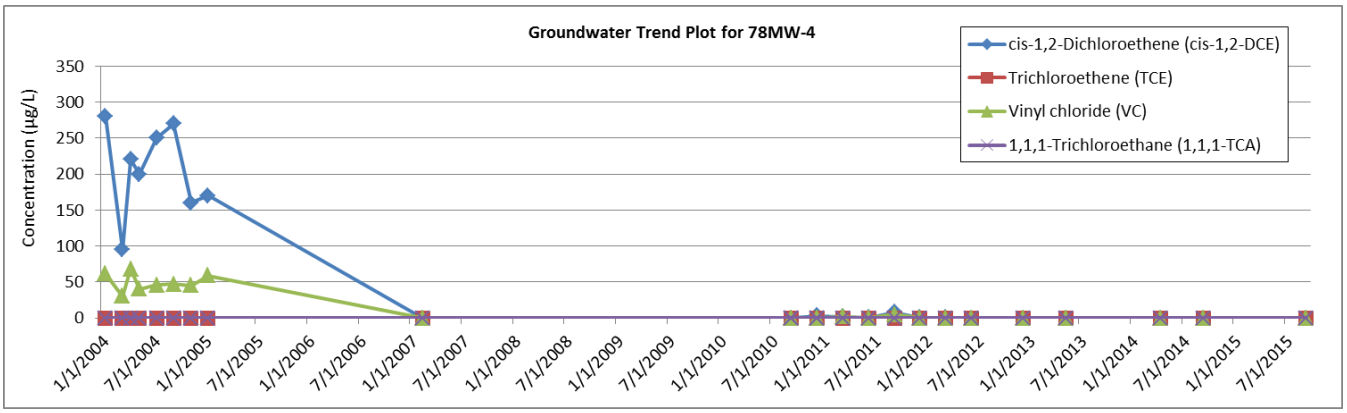
Analyte	SCL	5/21/2013	4/23/2014	9/3/2014	9/23/2015
cis-1,2-DCE	70	1.58	1.16	1.2	0.88
TCE	1	0.459	0.386	0.303	0
VC	1	0	0	0	0
1,1,1-TCA	30	0	0	0	0



Analyte	SCL	3/22/2004	4/22/2004	5/21/2004	7/28/2004	9/17/2004	11/18/2004	1/11/2005	2/26/2007	3/5/2007	9/27/2010	12/22/2010
cis-1,2-DCE	70	130	120	120	190	230	170	170	7.43	103	4.82	5.48
TCE	1	5.3	3.8	3.3	3.8	4	2.6	2.5	0.5	1.83	0	0
VC	1	51	37	51	68	92	73	96	12.7	173	5.21	20.8
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0

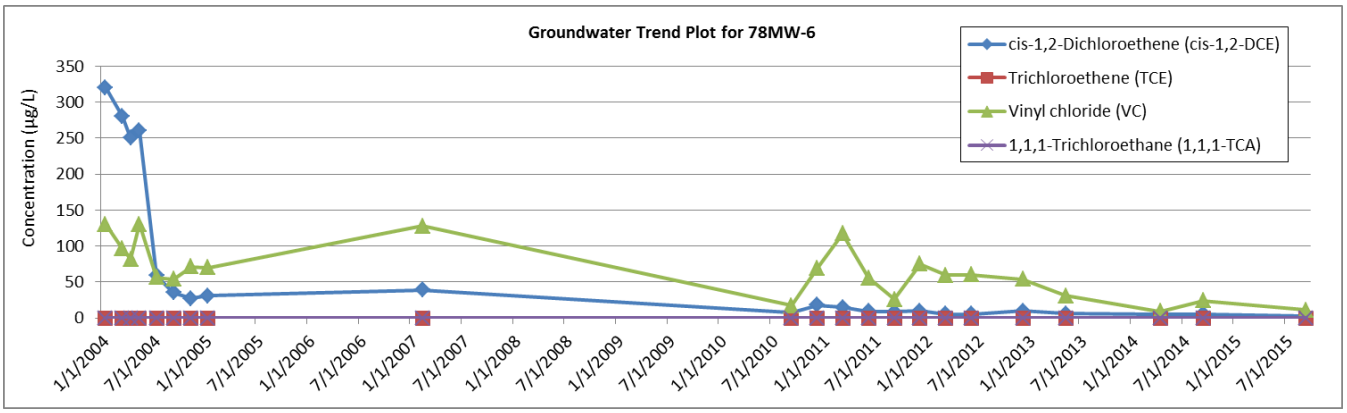
Analyte	SCL	3/17/2011	6/20/2011	9/27/2011	12/19/2011	3/20/2012	6/25/2012	12/17/2012	5/21/2013	4/23/2014	9/3/2014	9/23/2015
cis-1,2-DCE	70	7.48	4.75	5.48	0	0	0.535	0.692	0.534	0	0	0
TCE	1	0	0	0	0	0	0	0	0	0	0	0
VC	1	62.8	27.1	26.7	1.22	0.445	9.72	4.51	3.91	0.658	0	0
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0

Table 20-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Site 78 (PICA-013) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	1/26/2004	3/22/2004	4/22/2004	5/21/2004	7/28/2004	9/17/2004	11/18/2004	1/11/2005	2/26/2007	9/27/2010	12/22/2010	9/27/2010
cis-1,2-DCE	70	280	95	220	200	250	270	160	170	0	0	2.9	0
TCE	1	0	0	0	0	0	0	0	0	0	0	0	0
VC	1	61	30	68	40	46	47	45	59	0	0	0	0
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	12/22/2010	3/17/2011	6/20/2011	9/27/2011	12/19/2011	3/20/2012	6/25/2012	12/17/2012	5/21/2013	4/23/2014	9/3/2014	9/23/2015
cis-1,2-DCE	70	2.9	1.53	0.565	7.59	0.445	0.27	0	0	0	0	0	0
TCE	1	0	---	0	---	0	0	0	0	0	0	0	0
VC	1	0	1.93	0	5.03	0	0	0	0	0	0	0	0
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0	0



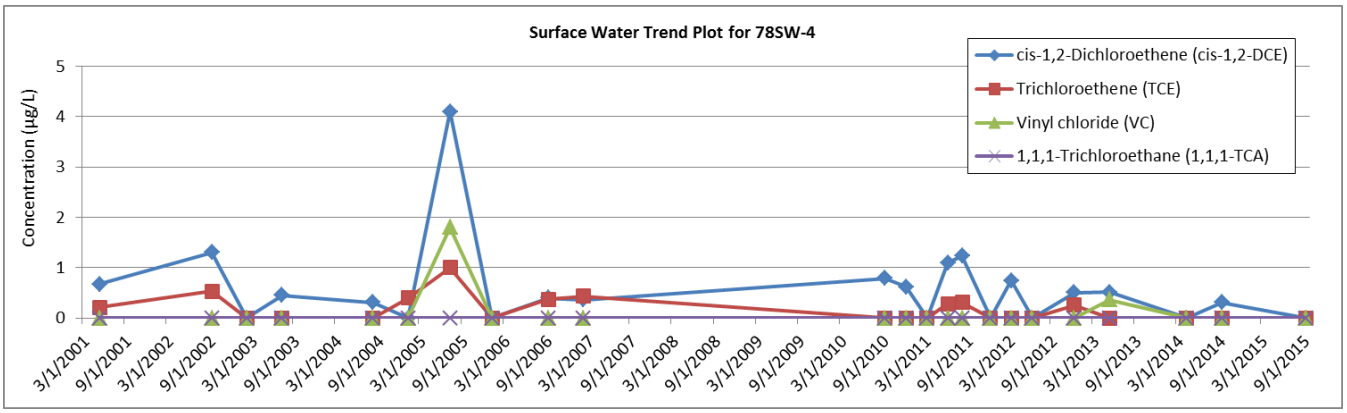
Analyte	SCL	1/26/2004	3/18/2004	4/21/2004	5/20/2004	7/27/2004	9/14/2004	11/17/2004	1/10/2005	2/26/2007	9/27/2010	12/22/2010	3/17/2011
cis-1,2-DCE	70	320	280	250	260	59	35	27	31	39.2	7.01	18	14.6
TCE	1	0	0	0	0	0	0	0	0	0	0	0	0
VC	1	130	96	82	130	56	54	71	70	128	17.2	69.2	117
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	6/20/2011	9/27/2011	12/19/2011	3/20/2012	6/25/2012	12/17/2012	5/21/2013	4/23/2014	9/3/2014	9/23/2015
cis-1,2-DCE	70	9.24	8.18	9.55	5.12	5.33	9.44	5.91	4.58	5.65	2.5
TCE	1	0	0	0	0	0	0	0	0	0	0
VC	1	55.5	26	75	59.7	59.9	53.6	31	8.96	24.2	10.8
1,1,1-TCA	30	0	0	0	0	0	0	0	0	0	0

Table 20-2

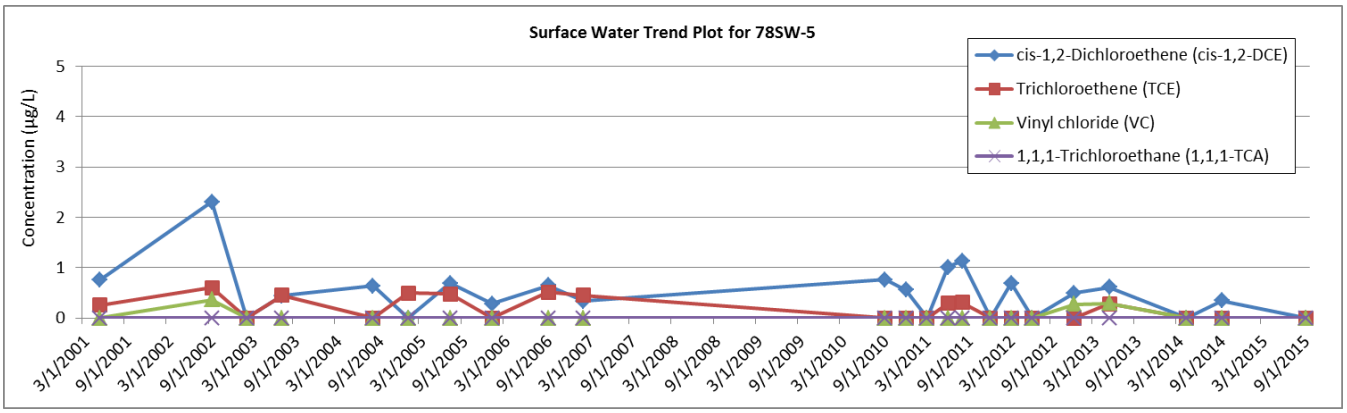
Trend Plots of Selected VOC Data

2015 Annual Monitoring Report
Site 78 (PICA-013) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	5/22/2001	9/30/2002	2/24/2003	7/24/2003	8/12/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	9/27/2010	12/8/2010
cis-1,2-DCE	592	0.67	1.3	0	0.45	0.31	0	4.1	0	0.396	0.365	0.789	0.62
TCE	1.09	0.21	0.53	0	0	0	0.4	1	0	0.371	0.431	0	0
VC	0.082	0	0	0	0	0	0	1.8	0	0	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0	0	0

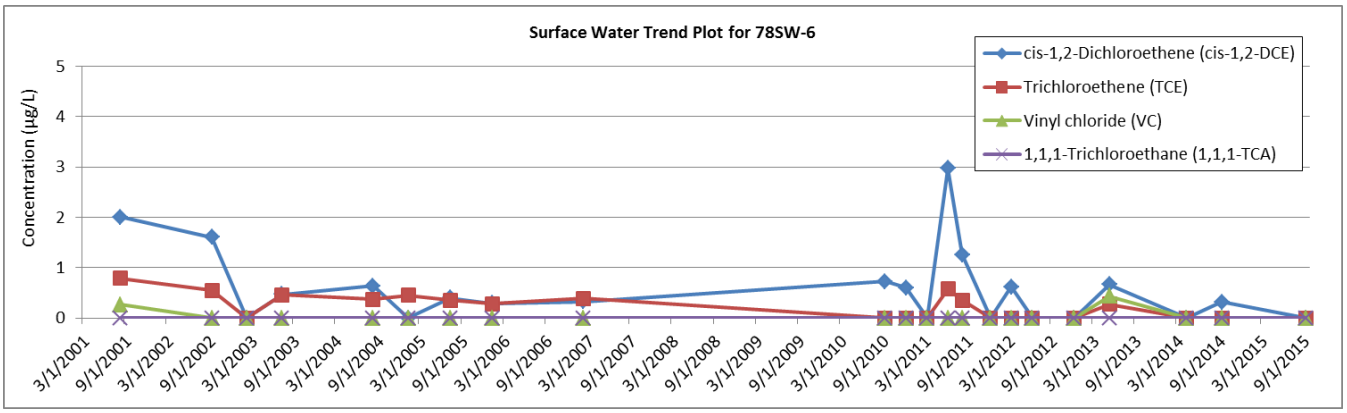
Analyte	SCL	3/18/2011	6/20/2011	8/11/2011	12/7/2011	3/6/2012	6/13/2012	12/5/2012	5/8/2013	4/23/2014	9/3/2014	9/24/2015
cis-1,2-DCE	592	0	1.1	1.23	0	0.739	0	0.504	0.513	0	0.311	0
TCE	1.09	0	0.283	0.307	0	0	0	0.25	0	0	0	0
VC	0.082	0	0	0	0	0	0	0	0.357	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0	0



Analyte	SCL	5/22/2001	9/30/2002	2/24/2003	7/24/2003	8/12/2004	1/25/2005	7/11/2005	1/30/2006	9/25/2006	2/16/2007	9/27/2010	12/8/2010
cis-1,2-DCE	592	0.75	2.3	0	0.44	0.64	0	0.69	0.28	0.645	0.331	0.758	0.556
TCE	1.09	0.25	0.6	0	0.45	0	0.49	0.48	0	0.513	0.448	0	0
VC	0.082	0	0.36	0	0	0	0	0	0	0	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	3/18/2011	6/20/2011	8/11/2011	12/7/2011	3/6/2012	6/13/2012	12/5/2012	5/8/2013	4/23/2014	9/3/2014	9/24/2015
cis-1,2-DCE	592	0	1.01	1.13	0	0.686	0	0.493	0.613	0	0.343	0
TCE	1.09	0	0.287	0.309	0	0	0	0	0.283	0	0	0
VC	0.082	0	0	0	0	0	0	0.271	0.288	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0	0

Table 20-2
Trend Plots of Selected VOC Data
2015 Annual Monitoring Report
Site 78 (PICA-013) Groundwater and Surface Water
Picatinny Arsenal, New Jersey



Analyte	SCL	8/23/2001	9/30/2002	2/24/2003	7/24/2003	8/12/2004	1/25/2005	7/11/2005	1/30/2006	2/16/2007	9/27/2010	12/8/2010	3/18/2011
cis-1,2-DCE	592	2	1.6	0	0.47	0.64	0	0.4	0.29	0.327	0.727	0.603	0
TCE	1.09	0.79	0.55	0	0.46	0.37	0.45	0.35	0.28	0.383	0	0	0
VC	0.082	0.26	0	0	0	0	0	0	0	0	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0	0	0

Analyte	SCL	6/20/2011	8/11/2011	12/7/2011	3/6/2012	6/13/2012	12/5/2012	5/8/2013	4/23/2014	9/3/2014	9/24/2015
cis-1,2-DCE	592	2.97	1.26	0	0.614	0	0	0.661	0	0.314	0
TCE	1.09	0.574	0.355	0	0	0	0	0.272	0	0	0
VC	0.082	0	0	0	0	0	0	0.429	0	0	0
1,1,1-TCA	120	0	0	0	0	0	0	0	0	0	0

Table 21-3
PICA 204 Monitoring Program
2014 Annual Monitoring Report
Mid-Valley (PICA-204) Groundwater
Picatinny Arsenal, New Jersey

Monitoring Program	Analytical Parameters	Sampling Method	Sampling Frequency
ERD Performance Monitoring	TCL VOCs	PDB or HydraSleeve™	Year 1: quarterly Years 2 – 35: semi-annually over duration of injections
	ERD performance parameters Dissolved gases (ethene, ethane, methane) DOC Dissolved iron (as neeeded)	HydraSleeve™	
	Field parameters (pH, temperature, specific conductance)	Down-well probe	
	Field parameter (Water levels)	Down-well probe	Year 1: monthly for 6 months; quarterly for 6 months Years 2 – 35: semi-annually over duration of injections
VOC Plumes MNA	TCL VOCs	PDB	Years 1 – 2: • quarterly for northern, western, & upgradient Robinson Run VOC plume wells (ERD area); • semi-annually for downgradient Robinson Run VOC plume area wells Years 3 – 35: annually
	Field parameters (pH, temperature, DO, ORP, specific conductance) (Water levels)	Down-well probe	
	Biogeochemical (TOC, nitrate, sulfate, dissolved iron) Field parameter (turbidity[1])	HydraSleeve™	Years 1 - 35: annually
RDX Plume MNA	Explosives[2] Field parameter (turbidity[1])	HydraSleeve™	Years 1 – 2: quarterly Years 3 – 35: annually
	Field parameters (pH, temperature, DO, ORP, specific conductance) (Water levels)	Down-well probe	
	Biogeochemical (TOC, nitrate, sulfate, dissolved iron)	HydraSleeve™	Years 1 – 35: annually
Former DRMO Yard MNA	Explosives[2] Metals (total and dissolved arsenic, lead, cadmium; total sodium) Field parameter (turbidity[1])	HydraSleeve™	Years 1 – 2: quarterly Years 3 – 35: annually
	Field parameters (pH, temperature, DO, ORP, specific conductance) (Water levels)	Down-well probe	
	Biogeochemical (TOC, nitrate, sulfate, dissolved iron)	HydraSleeve™	Years 1 – 35: annually
Surface Water Sampling	TCL VOCs Explosives[2]	Grab	Years 1 – 2: quarterly Years 3 – 35: annually
Sites 5 and 6 Shell Burial Areas LTM	TCL VOCs	PDB	Years 1 – 2: semi-annually Years 3 – 30: annually
	Explosives[2] Metals (total and dissolved lead, copper, antimony, zinc, aluminum)	HydraSleeve™	
	Field parameters (pH, temperature, DO, ORP, specific conductance, turbidity[1]) (Water levels)	Down-well probe	
Potable Supply Well LTM	TCL VOCs Explosives[2]	Grab	Years 1 – 35: annually

Notes:

1. Turbidity of the sample dispensed from the HydraSleeve™ will be measured.
2. The list of explosives for analysis includes those specified in US Environmental Protection Agency Method 8330.

DO - dissolved oxygen
DOC - dissolved organic carbon
DRMO - Defense Reutilization and Marketing Office
ERD - Enhanced Reductive Dechlorination
LTM - long term monitoring
MNA - monitored natural attenuation
LTM - long term monitoring
MNA - monitored natural attenuation
ORP - oxidation-reduction potential
PDB - passive diffusion bag
RDX - cyclotrimethylenetrinitramine or cyclonite
TCL - Target Contaminant List
TOC - total organic carbon
VOC - volatile organic compounds

Table 21-4
Summary of Monitoring Wells and Analytes
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Mid-Valley (PICA-204) Groundwater
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Area	Well ID	Aquifer Unit	Screened Interval (ft bgs)			Monitoring Program							Analytes				
						VOC Plumes MNA	RDX Plumes MNA	Former DRMO Yard MNA	Site 5 Shell Burial Area LTM	Site 6 Shell Burial Area LTM	Potable Supply Well LTM	ERD Performance Monitoring	VOCs[1]	Explosives[2]	Metals	ERD Performance Monitoring[5]	Biogeochemical[6]
F	104MW-3	Weathered/Unconfined	10	-	20	X							X				X
F	104MW-4	Lower Semi-Confined	81	-	91	X	X						X	X			X
F	104MW-6A	Weathered/Unconfined	12	-	22		X							X			X
F	138MW-4	Lower Semi-Confined	80	-	90	X	X						X	X			X
F	MW138-1	Weathered/Unconfined	21	-	31	X	X						X	X			X
F	MWF-2A	Weather/Unconfined	10	-	20	X							X				X
F	MWF-2B	Lower Semi-Confined	36	-	46	X							X				X
G	101MW-5	Weathered/Unconfined	5	-	15		X	X						X	X[3]		X
G	101MW-6	Lower Semi-Confined	80	-	90		X	X						X	X[3]		X
G	G_31-MW-001	Weathered/Unconfined	10	-	20		X	X						X	X[3]		X
G	G_31-MW-002	Weathered/Unconfined	10	-	20		X	X						X	X[3]		X
G	GMW-4	Weathered/Unconfined	10	-	20	X	X						X	X			X
G	GMW-5	Weathered/Unconfined	10	-	20	X							X				X
G	MW-1	Weathered/Unconfined	5	-	15		X	X						X	X[3]		
G	MW-3_G	Weathered/Unconfined	2	-	12		X	X						X	X[3]		X
G	MW52-2	Weathered/Unconfined	20	-	30	X							X				X
G	MWG-2B	Lower Semi-Confined	72	-	82	X							X				X
G	PW-302D	Bedrock	110	-	403						X		X	X			
H	62MW-2	Weathered/Unconfined	21.2	-	31.2	X							X				X
H	64MW-2	Weathered/Unconfined	14.05	-	24.05	X							X				X
L	114MW-1A	Weathered/Unconfined	12	-	22		X							X			X
L	125MW-1A	Weathered/Unconfined	41	-	51	X	X						X	X			X
L	125MW-1B	Bedrock	66	-	81	X	X						X	X			X
L	125MW-3	Bedrock	80	-	95	X	X						X	X			X
L	138MW-5B	Weathered/Unconfined	22	-	32		X							X			X
L	161MW-1B	Bedrock	107	-	122	X							X				X
L	161MW-4B	Weathered/Unconfined	15	-	25	X							X				X
L	161MW-2	Weathered/Unconfined	45	-	55	X							X				X
L	161MW-5	Weathered/Unconfined	21	-	31	X	X						X	X			X
L	161MW-5B	Bedrock	46	-	61		X							X			X
L	161MW-7	Bedrock	33	-	43	X							X				X
L	171MW-1	Bedrock	118	-	128	X							X				X
L	171MW-10	Bedrock	30	-	50							X	X			X	
L	171MW-10B	Bedrock	140	-	160							X	X			X	
L	171MW-11	Bedrock	140	-	160	X							X				X
L	171MW-11B	Bedrock	180	-	200	X							X				X
L	171MW-12	Bedrock	140	-	160	X							X				X
L	171MW-2	Bedrock	27	-	37							X	X			X	
L	171MW-4	Bedrock	72	-	82	X							X				X

Table 21-4
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Area	Well ID	Aquifer Unit	Screened Interval (ft bgs)			Monitoring Program							Analytes				
						VOC Plumes MNA	RDX Plumes MNA	Former DRMO Yard MNA	Site 5 Shell Burial Area LTM	Site 6 Shell Burial Area LTM	Potable Supply Well LTM	ERD Performance Monitoring	VOCs[1]	Explosives[2]	Metals	ERD Performance Monitoring[5]	Biogeochemical[6]
L	171MW-5	Bedrock	30	-	40	X							X				X
L	171MW-5B	Bedrock	70	-	90	X							X				X
L	171MW-6	Bedrock	38	-	58	X						X	X			X	X
L	171MW-6B	Bedrock	70	-	90	X						X	X			X	X
L	171MW-6C	Bedrock	190	-	210	X						X	X			X	X
L	171MW-7B	Bedrock	80	-	100	X							X				X
L	171MW-8	Bedrock	65	-	85	X						X	X			X	X
L	171MW-9	Bedrock	31	-	51	X							X				X
L	17MW-2	Weather/Unconfined	25	-	35	X				X			X	X	X[4]		X
L	17MW-4	Weather/Unconfined	39.4	-	49.4		X							X			X
L	17MW-5	Bedrock	22	-	42		X							X			X
L	17MW-5B	Bedrock	75	-	85		X							X			X
L	35MW-5B	Weathered/Unconfined	28	-	38	X							X				X
L	35MW-5C	Bedrock	105	-	115	X	X						X	X			
L	5MW-4	Weathered/Unconfined	10.5	-	20.5				X				X	X	X[4]		
L	5MW-4D	Bedrock	26	-	36				X				X	X	X[4]		
L	5MW-7	Weathered/Unconfined	17	-	27				X				X	X	X[4]		
L	5MW-8	Weathered/Unconfined & Bedrock	7	-	17				X				X	X	X[4]		
L	6MW-4	Weather/Unconfined	25	-	35	X				X			X	X	X[4]		X
L	6MW-4D	Bedrock	52	-	62	X				X			X	X	X[4]		X
L	B1038MW-2	Weathered/Unconfined	22	-	32	X							X				X
L	B1038MW-3	Weathered/Unconfined	42	-	52	X							X				X
L	B1090MW-2	Bedrock	108	-	123	X	X						X	X			X
L	DM17-3	Bedrock	30	-	40	X	X						X	X			X
L	DM5-2	Weathered/Unconfined	9.1	-	19.1				X				X	X	X[4]		
L	DM6-1	Bedrock	68	-	78		X			X		X	X	X	X[4]		X
L	DM6-2	Bedrock	20	-	30	X				X			X	X	X[4]		X
L	DM6-3	Bedrock	12	-	22					X			X	X	X[4]		
L	171IW-002	Bedrock	30	-	120							X				X[7]	
L	171IW-005	Bedrock	30	-	120							X				X[7]	
L	171IW-010S	Bedrock	20	-	90							X				X[7]	
L	171IW-010D	Bedrock	90	-	190							X				X[7]	
L	171MW-8B	Bedrock	100	-	120							X	X			X	
L	171MW-13	Bedrock	70	-	90	X						X	X			X	X
L	171MW-13B	Bedrock	150	-	170	X						X	X			X	X
L	171MW-14	Bedrock	50	-	70							X	X			X	
L	171MW-14B	Bedrock	80	-	100							X	X			X	

Table 21-4
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Area	Well ID	Aquifer Unit	Screened Interval (ft bgs)			Monitoring Program							Analytes				
						VOC Plumes MNA	RDX Plumes MNA	Former DRMO Yard MNA	Site 5 Shell Burial Area LTM	Site 6 Shell Burial Area LTM	Potable Supply Well LTM	ERD Performance Monitoring	VOCs[1]	Explosives[2]	Metals	ERD Performance Monitoring[5]	Biogeochemical[6]
L	171MW-15	Bedrock	60	-	80							X	X			X	
L	171MW-16	Bedrock	50	-	70							X	X			X	
L	171MW-16B	Bedrock	140	-	160							X	X			X	
L	171MW-17	Bedrock	50	-	70							X	X			X	
L	171MW-17B	Bedrock	140	-	160							X	X			X	
G	104SW-002	(Surface Water Location)	--	-	--	X	X						X	X			
L	104SW-001	(Surface Water Location)	--	-	--	X	X						X	X			
L	161SW-004	(Surface Water Location)	--	-	--	X	X						X	X			
L	161SW-010A	(Surface Water Location)	--	-	--	X	X						X	X			
L	171SW-003	(Surface Water Location)	--	-	--	X	X						X	X			

Notes:
1. Volatile organic compound (VOC) samples are submit for analysis of Target Contaminant List (TCL) VOCs.
2. Explosives samples are analyzed for the United States Environmental Protection Agency Method 8330 list of explosives.
3. Metals samples for the Former DRMO Yard are analyzed for total and dissolved arsenic, cadmium, and lead; and total sodium
4. Metals samples for the Shell Burial Areas are analyzed for total and dissolved lead, copper, antimony, zinc, and aluminum.
5. ERD Performance monitoring analytes include dissolved organic carbon, dissolved gases (methane, ethane, ethene), and dissolved iron (as needed).
6. Biogeochemical samples are analyzed for total organic carbon, nitrate/nitrite, sulfate, and dissolved iron.
7. Samples from injection wells are analyzed for dissolved organic carbon only
DRMO - Defense Reutilization and Marketing Office
ft bgs - feet below ground surface
ERD - Enhanced Reductive Dechlorination
LTM - long term monitoring
MNA - monitored natural attenuation
RDX - cyclotrimethylenetrinitramine
VOC - volatile organic compound

Table 21-7: Mid-Valley In Situ Treatment Zone via Enhanced Reductive Dechlorination Data Evaluation

Location	Well ID	Unit	Screened Interval (ft bgs)			Dissolved Organic Carbon (mg/L)		Methane (mg/L)		Degradation Products [%(DCE + VC)/total CVOCs]		Trends in total CVOC mass (evaluated visually and on molar basis)	Potentially effective ERD conditions established historically?
						Historical Max	Current	Historical Max	3Q 2015	Historical Max	3Q 2015		
1st Line IW	171IW-002	Bedrock	30	-	120	<20	<20	--	--	--	--	--	--
1st Line - ROI	171MW-6	Bedrock	38	-	58	>100	<20	0.05-0.5	<0.05	<10%	<10%	Stable / No Clear Trend	Yes
1st Line - ROI	171MW-6B	Bedrock	70	-	90	20-100	<20	>0.5	0.05-0.5	>50%	>50%	Stable / No Clear Trend	Yes
1st Line - ROI	171MW-6C	Bedrock	190	-	210	<20	<20	0.05-0.5	0.05-0.5	10-50%	<10%	Stable / No Clear Trend	Unclear
1st Line - ROI	171MW-14	Bedrock	50	-	70	<20	<20	<0.05	<0.05	<10%	<10%	Stable / No Clear Trend	No - but low mass
1st Line - ROI	171MW-14B	Bedrock	80	-	100	20-100	<20	>0.5	<0.05	>50%	>50%	Declining	Yes
2nd Line IW	171IW-005	Bedrock	30	-	120	20-100	<20	--	--	--	--	--	--
2nd Line ROI	171MW-15	Bedrock	60	-	80	<20	<20	>0.5	<0.05	>50%	>50%	Stable / No Clear Trend	Yes
2nd Line ROI	171MW-8	Bedrock	65	-	85	>100	<20	0.05-0.5	<0.05	>50%	<10%	Stable / No Clear Trend	Yes
2nd Line ROI	171MW-8B	Bedrock	100	-	120	<20	<20	<0.05	<0.05	10-50%	10-50%	Declining	Yes
Between 2nd and 3rd Line	171MW-2	Bedrock	27	-	37	<20	<20	<0.05	<0.05	<10%	<10%	Stable / No Clear Trend	Unclear
Between 2nd and 3rd Line	171MW-10	Bedrock	30	-	50	<20	<20	<0.05	<0.05	10-50%	<10%	Stable / No Clear Trend	Unclear
Between 2nd and 3rd Line	171MW-10B	Bedrock	140	-	160	<20	<20	<0.05	<0.05	<10%	<10%	Stable / No Clear Trend	Unclear
3rd Line - IW (S)	171IW-010S	Bedrock	20	-	90	>100	<20	--	--	--	--	--	--
3rd Line - IW (D)	171IW-010D	Bedrock	90	-	190	>100	<20	--	--	--	--	--	--
3rd Line ROI	171MW-16	Bedrock	50	-	70	<20	<20	0.05-0.5	<0.05	>50%	<10%	Stable / No Clear Trend	Yes
3rd Line ROI	171MW-16B	Bedrock	140	-	160	<20	<20	>0.5	<0.05	>50%	>50%	Stable / No Clear Trend	Yes
3rd Line ROI	171MW-17	Bedrock	50	-	70	20-100	<20	<0.05	<0.05	10-50%	<10%	Stable / No Clear Trend	Unclear
3rd Line ROI	171MW-17B	Bedrock	140	-	160	20-100	<20	>0.5	>0.5	>50%	>50%	Stable / No Clear Trend	Yes
DG 3rd Line	171MW-13	Bedrock	70	-	90	<20	<20	<0.05	<0.05	10-50%	10-50%	Stable / No Clear Trend	Unclear
DG 3rd Line	171MW-13B	Bedrock	150	-	170	20-100	<20	<0.05	<0.05	<10%	<10%	Stable / No Clear Trend	Unclear

Notes:
CVOC: chlorinated volatile organic compound
ERD: enhanced reductive dechlorination
DCE: cis-1,2-dichloroethene
DOC: dissolved organic carbon
IW: injection well
ROI: radius of influence
VC: vinyl chloride
"--" not applicable

DOC Key:

<20 mg/L	Limited distribution
20-100 mg/L	Some distribution
>100 mg/L	Good distribution

Methane Key:

<0.05 mg/L	Limited evidence of reducing conditions
0.05-0.5 mg/L	Some evidence
>0.5 mg/L	Significant evidence

Degradation Products Key:

<10%	Limited contaminant conversion
10-50%	Some contaminant conversion
>50%	Strong contaminant conversion