Table 4-1
Existing Well Construction Details Vestal
Water Supply Well 1-1 Superfund Site
Vestal, New York

WELL ID	Date Installed	Surface Completion	Survey Coordinates (NAD83)		Elevation (NAVD 88)			Well Diameter (inches)	Well Material	Screened Interval (ft, amsl)		Screened Interval (ft, bgs)		Comments
			Northing	Easting	Ground Surface (ft amsl)	Outer Casing (ft amsl)	Inner Casing (ft amsl)			Top	Bottom	Top	Bottom	
ERT-1D	2008	Flush Mount	761746.10	965369.89	824.34	824.34	824.03	2	PVC	45	50	779.34	774.34	Compression plug was not secured with a lock.
ERT-1I	2008	Flush Mount	761742.04	965367.78	824.50	824.59	824.18	2	PVC	25	30	799.50	794.50	Cover gasket damaged, missing bolts, no lock
ERT-1S	2008	Flush Mount	761745.34	965366.31	824.36	824.42	824.16	2	PVC	15	20	809.36	804.36	Cover gasket missing, 1 missing bolt
ERT-2D	2008	Flush Mount	761503.52	965287.54	824.53	824.55	824.15	2	PVC	45	50	779.53	774.53	Casing damaged, no cover, gasket or bolts
ERT-2I	2008	Flush Mount	761508.10	965286.42	824.63	824.60	824.21	2	PVC	25	30	799.63	794.63	Casing damaged, no cover, gasket or bolts
ERT-2S	2008	Flush Mount	761505.26	965282.61	824.50	824.54	824.33	2	PVC	12	17	812.50	807.50	Cover gasket and bolts missing
ERT-3D	2008	Flush Mount	761541.55	965272.46	824.91	824.92	824.33	2	PVC	45	50	779.91	774.91	Cover gasket and bolts missing
ERT-3I	2008	Flush Mount	761542.13	965276.55	824.94	825.01	824.38	2	PVC	25	30	799.94	794.94	Cover gasket and bolts missing
ERT-3S	2008	Flush Mount	761538.24	965275.08	824.98	825.05	824.53	2	PVC	12	17	813.48	808.48	Cover gasket and bolts missing
ERT-4D	2008	Flush Mount	761526.62	965084.09	824.16	824.16	823.74	2	PVC	45	50	779.16	774.16	Pad failing, cover gasket missing bolts stripped
ERT-4I	2008	Flush Mount	761521.53	965084.68	824.05	824.09	823.56	2	PVC	25	30	799.05	794.05	Casing and pad cracked, cover gasket and bolts missing
ERT-4S	2008	Flush Mount	761524.33	965081.30	824.17	824.15	823.70	2	PVC	9	14	815.17	810.17	Pad failing, cover gasket missing bolts stripped
ERT-5	2009	Flush Mount	761569.23	965436.23	824.68	824.77	824.37	2	PVC	60	65	764.68	759.68	1 bolt missing
ERT-6	2009	Flush Mount	761513.01	965283.21	824.64	824.72	824.43	2	PVC	60	65	764.64	759.64	Cover gasket and bolts stripped
ERT-7	2009	Flush Mount	761527.33	965072.55	824.69	824.37	824.08	2	PVC	60	65	764.69	759.69	Cover gasket and bolts missing
ERT-8	2010	Flush Mount	761663.71	964987.90	825.19	825.59	824.84	2	PVC	59	69	766.19	756.19	
MW-A	2009	Flush Mount	761793.17	965346.10	824.07	824.22	823.82	1.5	PVC	8	18	816.07	806.07	
MW-B	2009	Flush Mount	761770.36	965380.44	823.50	823.66	823.30	1.5	PVC	8	18	815.50	805.50	
MW-C	2009	Flush Mount	761752.82	965411.64	823.82	823.87	823.61	1.5	PVC	8	18	815.82	805.82	
MW-D	2009	Flush Mount	761775.95	965430.31	823.08	823.19	822.89	1.5	PVC	8	18	815.08	805.08	1 bolt missing
MW-E	2009	Flush Mount	761798.46	965404.67	824.65	824.83	824.47	1.5	PVC	8	18	816.65	806.65	
MW-F	2010	Flush Mount	761747.27	965367.32	824.24	824.41	823.95	2	SS	5	20	819.24	804.24	
MW-G	2010	Flush Mount	761726.52	965367.77	824.69	824.85	824.32	2	SS	5	20	819.69	804.69	
MW-H	2010	Flush Mount	761742.38	965390.07	824.52	824.46	824.08	2	SS	5	20	819.52	804.52	
MW-I	2010	Flush Mount	761753.51	965343.00	824.15	824.34	823.78	2	SS	5	20	819.15	804.15	

Notes:

amsl - above mean sea level
bgs - below ground surface
btoc - below top of casing
DTW - depth to water
ft - feet
PVC - polyvinylchloride
SS - stainless steel

Table 4-2
Soil Sample Summary Table
Vestal Water Supply Well Superfund Site
Vestal, New York

Boring ID	Treatment Area	Elevation Ground Surface (feet msl)	Interval	Depth (feet bgs)									Elevation (feet msl)								
PSB-201	Area 3	822.73	top	7.5	11	18	19.5	23.5	27.5	30.5	34.5	NS	815.23	811.73	804.73	803.23	799.23	795.23	792.23	788.23	NS
			bottom	8	11.5	18.5	20	24	28	31	35	NS	814.73	811.23	804.23	802.73	798.73	794.73	791.73	787.73	NS
PSB-202	Area 3	824.07	top	7	11	15.5	17	22.5	26	29.5	34.5	NS	817.07	813.07	808.57	807.07	801.57	798.07	794.57	789.57	NS
			bottom	7.5	11.5	16	17.5	23	26.5	30	35	NS	816.57	812.57	808.07	806.57	801.07	797.57	794.07	789.07	NS
PSB-203	Area 3	821.42	top	7	10	15.5	18	24.5	26.5	30	33	NS	814.42	811.42	805.92	803.42	796.92	794.92	791.42	788.42	NS
			bottom	7.5	10.5	16	18.5	25	27	30.5	33.5	NS	813.92	810.92	805.42	802.92	796.42	794.42	790.92	787.92	NS
PSB-204	Area 3	823.97	top	7.5	10	11.5	20.5	22	25	32	34	NS	816.47	813.97	812.47	803.47	801.97	798.97	791.97	789.97	NS
			bottom	8	10.5	12	21	22.5	25.5	32.5	34.5	NS	815.97	813.47	811.97	802.97	801.47	798.47	791.47	789.47	NS
PSB-205	Area 4-2b	825.25	top	7	11	13.5	17.5	21.5	26.5	31.5	34.5	NS	818.25	814.25	811.75	807.75	803.75	798.75	793.75	790.75	NS
			bottom	7.5	11.5	14	18	22	27	32	35	NS	817.75	813.75	811.25	807.25	803.25	798.25	793.25	790.25	NS
PSB-206	Area 4-2b	825.24	top	7.5	8.5	14	17.5	21.5	23.5	32	34.5	NS	817.74	816.74	811.24	807.74	803.74	801.74	793.24	790.74	NS
			bottom	8	9	14.5	18	22	24	32.5	35	NS	817.24	816.24	810.74	807.24	803.24	801.24	792.74	790.24	NS
PSB-207	Area 4-2b	825.19	top	7	11	14	19	NS	NS	NS	NS	NS	818.19	814.19	811.24	806.24	NS	NS	NS	NS	NS
			bottom	7.5	11.5	14.5	19.5	NS	NS	NS	NS	NS	817.69	813.69	810.69	805.69	NS	NS	NS	NS	NS
PSB-208	Area 4-2b	825.26	top	7	10	15.5	20	23.5	27.5	31.5	33	NS	818.26	815.26	809.76	805.26	801.76	797.76	793.76	792.26	NS
			bottom	7.5	10.5	16	20.5	24	28	32	33.5	NS	817.76	814.76	809.26	804.76	801.26	797.26	793.26	791.76	NS
PSB-209	Area 4-2b	825.22	top	6	11.5	15.5	19	23.5	27	31	33.5	NS	819.22	813.72	809.72	806.22	801.72	798.22	794.22	791.72	NS
			bottom	6.5	12	16	19.5	24	27.5	31.5	34	NS	818.72	813.22	809.22	805.72	801.22	797.72	793.72	791.22	NS
CB-220	Area 4-2b	825.23	top	6.5	11.5	12	14.5	25	27.5	29.5	33.5	NS	818.73	813.73	813.23	810.73	800.23	797.73	795.73	791.73	NS
			bottom	7	12	12.5	15	25.5	28	30	34	NS	818.23	813.23	812.73	810.23	799.73	797.23	795.23	791.23	NS
ASB-1	Area 4-2	824.17	top	7	9.5	11.5	20	21.5	24	28	34	NS	817.17	814.67	812.67	804.17	802.67	800.17	796.17	790.17	NS
			bottom	7.5	10	12	20.5	22	24.5	28.5	34.5	NS	816.67	814.17	812.17	803.67	802.17	799.67	795.67	789.67	NS
ASB-2	Area 4-2	824.13	top	7.5	10	11.5	15	19	22.5	25	31.5	NS	816.63	814.13	812.63	809.13	805.13	801.63	799.13	792.63	NS
			bottom	8	10.5	12	15.5	19.5	23	25.5	32	NS	816.13	813.63	812.13	808.63	804.63	801.13	798.63	792.13	NS
ASB-3	Area 4-2	824.21	top	7	9	11.5	15.5	19	20	24	28	32	817.21	815.21	812.71	808.71	805.21	804.21	800.21	796.21	792.21
			bottom	7.5	9.5	12	16	19.5	20.5	24.5	28.5	32.5	816.71	814.71	812.21	808.21	804.71	803.71	799.71	795.71	791.71
ASB-4	Area 4-2	824.34	top	NS	11	15.5	19.5	23.5	27.5	30.5	34.5	NS	NS	813.34	808.84	804.84	800.84	796.84	793.84	789.84	NS
			bottom	NS	11.5	16	20	24	28	31	35	NS	NS	812.84	808.34	804.34	800.34	796.34	793.34	789.34	NS
PSB-210	Area 4-2	825.26	top	5.5	9	14	17.5	22.5	27.5	29	NS	NS	819.76	816.26	811.26	807.76	802.76	797.76	796.26	NS	NS
			bottom	6	9.5	14.5	18	23	28	29.5	NS	NS	819.26	815.76	810.76	807.26	802.26	797.26	795.76	NS	NS
PSB-211	Area 4-2	824.95	top	6.5	10.5	15.5	17	23	23.5	28	32	NS	818.45	814.45	809.45	807.95	801.95	801.45	796.95	792.95	NS
			bottom	7	11	16	17.5	23.5	24	28.5	32.5	NS	817.95	813.95	808.95	807.45	801.45	800.95	796.45	792.45	NS
PSB-212	Area 4-2	824.87	top	7	10.5	17	19.5	26	27.5	30.5	34.5	NS	817.87	814.37	807.87	805.37	798.87	797.37	794.37	790.37	NS
			bottom	7.5	11	17.5	20	26.5	28	31	35	NS	817.37	813.87	807.37	804.87	798.37	796.87	793.87	789.87	NS
PSB-213	Area 4-2	824.40	top	6	10	15.5	19.5	23.5	27	30	34	NS	818.40	814.40	808.90	804.90	800.90	797.40	794.40	790.40	NS
			bottom	6.5	10.5	16	20	24	27.5	30.5	34.5	NS	817.90	813.90	808.40	804.40	800.40	796.90	793.90	789.90	NS
PSB-214	Area 4-2	824.29	top	6	11	15.5	19.5	23.5	27.5	30	34.5	NS	818.29	813.29	808.79	804.79	800.79	796.79	794.29	789.79	NS
			bottom	6.5	11.5	16	20	24	28	30.5	35	NS	817.79	812.79	808.29	804.29	800.29	796.29	793.79	789.29	NS
ASB-5	Area 4-2b	826.19	top	6	7.5	11	14	17	21	23	30.5	34	820.19	818.69	815.19	812.19	809.19	805.19	803.19	795.69	792.19
			bottom	6.5	8	11.5	14.5	17.5	21.5	23.5	31	34.5	819.69	818.19	814.69	811.69	808.69	804.69	802.69	795.19	791.69
ASB-6	Area 4-2b	826.19	top	7	8.5	11.5	14	18	26.5	30	34.5	NS	819.19	817.69	814.69	812.19	808.19	799.69	796.19	791.69	NS
			bottom	7.5	9	12	14.5	18.5	27	30.5	35	NS	818.69	817.19	814.19	811.69	807.69	799.19	795.69	791.19	NS
ASB-7	Area 4-2b	825.24	top	5	8	12	17	23	NS	31	33.5	NS	820.24	817.24	813.24	808.24	802.24	NS	794.24	791.74	NS
			bottom	5.5	8.5	12.5	17.5	23.5	NS	31.5	34	NS	819.74	816.74	812.74	807.74	801.74	NS	793.74	791.24	NS
PSB-215	Area 4-1	824.87	top	5.5	14	17	18.5	26	28	33	34.5	NS	819.37	810.87	807.87	806.37	798.87	796.87	791.87	790.37	NS
			bottom	6	14.5	17.5	19	26.5	28.5	33.5	35	NS	818.87	810.37	807.37	805.87	798.37	796.37	791.37	789.87	NS
PSB-216	Area 4-1	823.58	top	6	9.5	13	17	24	30	28	33	NS	817.58	814.08	810.58	806.58	799.58	793.58	795.58	790.58	NS
			bottom	6.5	10	13.5	17.5	24.5	30.5	28.5	33.5	NS	817.08	813.58	810.08	806.08	799.08	793.08	795.08	790.08	NS
PSB-217	Area 4-1	824.08	top	5	10	14	16	21.5	24	29	32.5	NS	819.08	814.08	810.08	808.08	802.58	800.08	795.08	791.58	NS
			bottom	5.5	10.5	14.5	16.5	22	24.5	29.5	33	NS	818.58	813.58	809.58	807.58	802.08	799.58	794.58	791.08	NS
PSB-218	Area 4-1	824.93	top	5.5	10.5	14.5	16.5	23	26.5	30	33	NS	819.43	814.43	810.43	808.43	801.93	798.43	794.93	791.93	NS
			bottom	6	11	15	17	23.5	27	30.5	33.5	NS	818.93	813.93	809.93	807.93	801.43	797.93	794.43	791.43	NS
PSB-219	Area 4-1	824.14	top	5.5	10	13	16.5	21	26	29.5	34	NS	818.64	814.14	811.14	807.64	803.14	798.14	794.64	790.14	NS
			bottom	6	10.5	13.5	17	21.5	26.5	30	34.5	NS	818.14	813.64	810.64	807.14	802.64	797.64	794.14	789.64	NS

Notes: NS - No sample collected
bgs - below ground surface
amsl - above mean sea level
Elevations based on NAVD 88 datum

Table 4-3
Area 3 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	PSB-201		PSB-201		PSB-201 Dup		PSB-201		PSB-201		PSB-201		PSB-201		PSB-201		PSB-201		TB-20180313		EB-20180313	
		Sample Date:	3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018		3/13/2018	
		Sample Depth (ft):	7.5 - 8		11 - 11.5		11 - 11.5		18 - 18.5		19.5 - 20		23.5 - 24		27.5 - 28		30.5 - 31		34.5 - 35		TB		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,1,2,2-Tetrachloroethane	79-34-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,1,2-Trichloroethane	79-00-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,1-Dichloroethane	75-34-3	270	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U
1,1-Dichloroethene	75-35-4	330	***330***	U	*320*	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2,3-Trichlorobenzene	87-61-6		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2,4-Trichlorobenzene	120-82-1		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2,4-Trimethylbenzene	95-63-6	3600	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2-Dibromo-3-Chloropropane	96-12-8		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.05*	U	*0.05*	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2-Dichlorobenzene	95-50-1	1100	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,2-Dichloroethane	107-06-2	20	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U
1,2-Dichloropropane	78-87-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,3-Dichlorobenzene	541-73-1	2400	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
1,4-Dichlorobenzene	106-46-7	1800	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
2-Hexanone	591-78-6		*660*	U	*630*	U	*650*	U	*800*	U	*760*	U	*660*	U	*690*	U	*550*	U	*570*	U	*5*	U	*5*	U
Acetone	67-64-1	50	***660***	U	***630***	U	***650***	U	***800***	U	***760***	U	***660***	U	***690***	U	***550***	U	***570***	U	*5*	U	3.5	J
Benzene	71-43-2	60	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U
Bromochloromethane	74-97-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Bromodichloromethane	75-27-4		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Bromoform	75-25-2		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Bromomethane	74-83-9		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Carbon Disulfide	75-15-0		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Carbon Tetrachloride	56-23-5	760	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Chlorobenzene	108-90-7	1100	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Chloroethane	75-00-3		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Chloroform	67-66-3	370	*330*	U	*320*	U	*330*	U	***400***	U	***380***	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Chloromethane	74-87-3		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Cis-1,2-Dichloroethylene	156-59-2	250	***330***	U	***320***	U	***330***	U	81	J	120	J	120	J	**290**	J	**370**		**270**	J	*0.5*	U	*0.5*	U
Cis-1,3-Dichloropropene	10061-01-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.4*	U	*0.4*	U
Cyclohexane	110-82-7		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Dibromochloromethane	124-48-1		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Dichlorodifluoromethane	75-71-8		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Ethylbenzene	100-41-4	1000	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	0.1	J
Isopropylbenzene (Cumene)	98-82-8		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
m,p-Xylene	179601-23-1		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	0.42	J
Methyl Acetate	79-20-9		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***660***	U	***630***	U	***650***	U	***800***	U	***760***	U	***660***	U	***690***	U	***550***	U	***570***	U	*5*	U	*5*	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*660*	U	*630*	U	*650*	U	*800*	U	*760*	U	*660*	U	*690*	U	*550*	U	*570*	U	*5*	U	*5*	U
Methylcyclohexane	108-87-2		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Methylene Chloride	75-09-2	50	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Styrene	100-42-5		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	0.18	J
Tert-Butyl Methyl Ether	1634-04-4	930	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Tetrachloroethylene (PCE)	127-18-4	1300	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Toluene	108-88-3	700	*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	0.52	
Trans-1,2-Dichloroethene	156-60-5	190	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U
Trans-1,3-Dichloropropene	10061-02-6		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Trichloroethylene (TCE)	79-01-6	470	*330*	U	*320*	U	*330*	U	**690**		**1100**		**960**		**850**		120	J	98	J	*0.5*	U	*0.5*	U
Trichlorofluoromethane	75-69-4		*330*	U	*320*	U	*330*	U	*400*	U	*380*	U	*330*	U	*350*	U	*280*	U	*280*	U	*0.5*	U	*0.5*	U
Vinyl Chloride	75-01-4	20	***330***	U	***320***	U	***330***	U	***400***	U	***380***	U	***330***	U	***350***	U	***280***	U	***280***	U	*0.5*	U	*0.5*	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-3
Area 3 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	PSB-202		PSB-202		PSB-202		PSB-202		PSB-202		PSB-202		PSB-202		PSB-202	
		Sample Date:	3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018	
		Sample Depth (ft):	7 - 7.5		11 - 11.5		15.5 - 16		17 - 17.5		22.5 - 23		26 - 26.5		29.5 - 30		34.5 - 35	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	***1600***	*U*	*280*	*U*	*360*	*U*	**16000**		270	J	**900**	J	*380*	*U*	*280*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,1,2-Trichloroethane	79-00-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,1-Dichloroethane	75-34-3	270	***1600***	*U*	46	J	***360***	*U*	***14000***	*U*	81	J	***1500***	*U*	***380***	*U*	***280***	*U*
1,1-Dichloroethene	75-35-4	330	***1600***	*U*	*280*	*U*	***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	*280*	*U*
1,2,3-Trichlorobenzene	87-61-6		1500	J	120	J	190	J	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,2,4-Trichlorobenzene	120-82-1		5200		470		680		2500	J	*400*	*U*	420	J	*380*	*U*	*280*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	**41000**		1200		3500		**23000**		*400*	*U*	2000		*380*	*U*	*280*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,2-Dichlorobenzene	95-50-1	1100	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
1,2-Dichloroethane	107-06-2	20	***1600***	*U*	***280***	*U*	***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	***280***	*U*
1,2-Dichloropropane	78-87-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	4100		100	J	340	J	2300	J	*400*	*U*	200	J	*380*	*U*	*280*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*1600*	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*1600*	*U*	*280*	*U*	170	J	***14000***	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
2-Hexanone	591-78-6		*3200*	*U*	*560*	*U*	*710*	*U*	*28000*	*U*	*790*	*U*	*3000*	*U*	*770*	*U*	*560*	*U*
Acetone	67-64-1	50	***3200***	*U*	***560***	*U*	***710***	*U*	***28000***	*U*	***790***	*U*	***3000***	*U*	***770***	*U*	***560***	*U*
Benzene	71-43-2	60	***1600***	*U*	***280***	*U*	***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	***280***	*U*
Bromochloromethane	74-97-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Bromodichloromethane	75-27-4		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Bromoform	75-25-2		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Bromomethane	74-83-9		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Carbon Disulfide	75-15-0		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Carbon Tetrachloride	56-23-5	760	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Chlorobenzene	108-90-7	1100	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Chloroethane	75-00-3		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Chloroform	67-66-3	370	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	*280*	*U*
Chloromethane	74-87-3		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	***1600***	*U*	**550**		230	J	**100000**		**20000**		**26000**		**360**	J	**520**	
Cis-1,3-Dichloropropene	10061-01-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Cyclohexane	110-82-7		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Dibromochloromethane	124-48-1		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Dichlorodifluoromethane	75-71-8		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Ethylbenzene	100-41-4	1000	**3000**		*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Isopropylbenzene (Cumene)	98-82-8		4100		100	J	340	J	*14000*	*U*	*400*	*U*	200	J	*380*	*U*	*280*	*U*
m,p-Xylene	179601-23-1		18000		320		1300		*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Methyl Acetate	79-20-9		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***3200***	*U*	***560***	*U*	***710***	*U*	***28000***	*U*	***790***	*U*	***3000***	*U*	***770***	*U*	***560***	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*3200*	*U*	*560*	*U*	*710*	*U*	*28000*	*U*	*790*	*U*	*3000*	*U*	*770*	*U*	*560*	*U*
Methylcyclohexane	108-87-2		1700		*280*	*U*	210	J	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Methylene Chloride	75-09-2	50	***1600***	*U*	***280***	*U*	***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	***280***	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		11000		340		850		*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Styrene	100-42-5		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	***1600***	*U*	*280*	*U*	*360*	*U*	***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Toluene	108-88-3	700	**5800**		200	J	380		***14000***	*U*	*400*	*U*	***1500***	*U*	*380*	*U*	*280*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	***1600***	*U*	***280***	*U*	***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	***280***	*U*
Trans-1,3-Dichloropropene	10061-02-6		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Trichloroethylene (TCE)	79-01-6	470	***1600***	*U*	*280*	*U*	210	J	**530000**		**12000**		**31000**		110	J	140	J
Trichlorofluoromethane	75-69-4		*1600*	*U*	*280*	*U*	*360*	*U*	*14000*	*U*	*400*	*U*	*1500*	*U*	*380*	*U*	*280*	*U*
Vinyl Chloride	75-01-4	20	***1600***	*U*	**620**		***360***	*U*	***14000***	*U*	***400***	*U*	***1500***	*U*	***380***	*U*	***280***	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-3
Area 3 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

			Location:	PSB-203		PSB-203 Dup		PSB-203		PSB-203		PSB-203		PSB-203		PSB-203		PSB-203		PSB-203		TB-20180315		EB-20180315	
			Sample Date:	3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018		3/15/2018	
			Sample Depth (ft):	7 - 7.5		10 - 10.5		10 - 10.5		15.5 - 16		18 - 18.5		24.5 - 25		26.5 - 27		30 - 30.5		33 - 33.5		TB		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400		330	U	110	J	93	J	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
2-Hexanone	591-78-6			660	U	780	U	830	U	770	U	750	U	730	U	640	U	670	U	710	U	5	U	5	U
Acetone	67-64-1	50		660	U	780	U	830	U	770	U	750	U	730	U	640	U	670	U	710	U	5	U	11	
Benzene	71-43-2	60		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Bromochloromethane	74-97-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Bromoform	75-25-2			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Bromomethane	74-83-9			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Chloroethane	75-00-3			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Chloroform	67-66-3	370		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Chloromethane	74-87-3			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250		330	U	390	U	410	U	950		780		45	J	320	U	340	U	360	U	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.4	U	0.4	U
Cyclohexane	110-82-7			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.17	J
Isopropylbenzene (Cumene)	98-82-8			330	U	110	J	93	J	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.7	
Methyl Acetate	79-20-9			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120		660	U	780	U	830	U	770	U	750	U	730	U	640	U	670	U	710	U	5	U	6.4	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1			660	U	780	U	830	U	770	U	750	U	730	U	640	U	670	U	710	U	5	U	5	U
Methylcyclohexane	108-87-2			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.28	J
Styrene	100-42-5			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.28	J
Tert-Butyl Methyl Ether	1634-04-4	930		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Toluene	108-88-3	700		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	1.6	
Trans-1,2-Dichloroethene	156-60-5	190		330	U	390	U	410	U	160	J	130	J	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470		330	U	310	J	230	J	5100		2400		750		700		260	J	110	J	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4			330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20		330	U	390	U	410	U	390	U	370	U	360	U	320	U	340	U	360	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-3
Area 3 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-204		PSB-204		PSB-204		PSB-204		PSB-204		PSB-204		PSB-204		PSB-204		TB-20180316		EB-20180316	
			Sample Date: 3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018	
			Sample Depth (ft): 7.5 - 8		10 - 10.5		11.5 - 12		20.5 - 21		22 - 22.5		25 - 25.5		32 - 32.5		34 - 34.5		TB		EB	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*500*	*U*	1300		*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	**13000**		**59000**		1600		*440*	*U*	100	J	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	1200		8000		240	J	190	J	98	J	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*990*	*U*	*1200*	*U*	*790*	*U*	*880*	*U*	*750*	*U*	*720*	*U*	*760*	*U*	*550*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	***990***	*U*	***1200***	*U*	***790***	*U*	***880***	*U*	***750***	*U*	***720***	*U*	***760***	*U*	***550***	*U*	*5*	*U*	22	
Benzene	71-43-2	60	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	*360*	*U*	***380***	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	***500***	*U*	***620***	*U*	***400***	*U*	110	J	130	J	50	J	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.4*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	940		**10000**		*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	0.17	J
Isopropylbenzene (Cumene)	98-82-8		1200		8000		240	J	190	J	98	J	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		2600		16000		520		*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	0.6	
Methyl Acetate	79-20-9		92	J	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***990***	*U*	***1200***	*U*	***790***	*U*	***880***	*U*	***750***	*U*	***720***	*U*	***760***	*U*	***550***	*U*	*5*	*U*	2.2	J
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*990*	*U*	*1200*	*U*	*790*	*U*	*880*	*U*	*750*	*U*	*720*	*U*	*760*	*U*	*550*	*U*	*5*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		1600		9800		280	J	220	J	93	J	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*500*	*U*	14000		490		*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	0.23	J
Styrene	100-42-5		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	0.3	J
Tert-Butyl Methyl Ether	1634-04-4	930	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	*500*	*U*	**940**		*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	0.87	
Trans-1,2-Dichloroethene	156-60-5	190	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	***500***	*U*	***620***	*U*	*400*	*U*	**1900**		**2400**		**990**		240	J	210	J	*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*500*	*U*	*620*	*U*	*400*	*U*	*440*	*U*	*380*	*U*	*360*	*U*	*380*	*U*	*270*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	***500***	*U*	***620***	*U*	***400***	*U*	***440***	*U*	***380***	*U*	***360***	*U*	***380***	*U*	***270***	*U*	*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-4
Area 4-1 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

			Location:	PSB-215		PSB-215		PSB-215		PSB-215		PSB-215		PSB-215		PSB-215		PSB-215		TB-20180309		EB-20180309	
			Sample Date:	3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018	
			Sample Depth (ft):	5.5 - 6		14 - 14.5		17 - 17.5		18.5 - 19		26 - 26.5		28 - 28.5		33 - 33.5		34.5 - 35		TB		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680		*280*	U	*330*	U	*370*	U	*320*	U	170	J	110	J	**690**		560		*0.5*	U	*0.5*	U
1,1,2,2-Tetrachloroethane	79-34-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,1,2-Trichloroethane	79-00-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,1-Dichloroethane	75-34-3	270		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	96	J	36	J	*0.5*	U	*0.5*	U
1,1-Dichloroethene	75-35-4	330		*280*	U	***330***	U	***370***	U	*320*	U	*290*	U	***370***	U	62	J	*290*	U	*0.5*	U	*0.5*	U
1,2,3-Trichlorobenzene	87-61-6			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,2,4-Trichlorobenzene	120-82-1			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,2,4-Trimethylbenzene	95-63-6	3600		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,2-Dibromo-3-Chloropropane	96-12-8			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.05*	U	*0.05*	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,2-Dichlorobenzene	95-50-1	1100		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,2-Dichloroethane	107-06-2	20		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U
1,2-Dichloropropane	78-87-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,3-Dichlorobenzene	541-73-1	2400		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
1,4-Dichlorobenzene	106-46-7	1800		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
2-Hexanone	591-78-6			*570*	U	*670*	U	*730*	U	*630*	U	*570*	U	*750*	U	*520*	U	*580*	U	*5*	U	*5*	U
Acetone	67-64-1	50		***570***	U	***670***	U	***730***	U	***630***	U	***570***	U	***750***	U	***520***	U	***580***	U	*5*	U	*5*	U
Benzene	71-43-2	60		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U
Bromochloromethane	74-97-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Bromodichloromethane	75-27-4			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Bromoform	75-25-2			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Bromomethane	74-83-9			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Carbon Disulfide	75-15-0			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Carbon Tetrachloride	56-23-5	760		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Chlorobenzene	108-90-7	1100		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Chloroethane	75-00-3			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Chloroform	67-66-3	370		*280*	U	*330*	U	***370***	U	*320*	U	*290*	U	***370***	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Chloromethane	74-87-3			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Cis-1,2-Dichloroethylene	156-59-2	250		***280***	U	***330***	U	***370***	U	***320***	U	60	J	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U
Cis-1,3-Dichloropropene	10061-01-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.4*	U	*0.4*	U
Cyclohexane	110-82-7			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Dibromochloromethane	124-48-1			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Dichlorodifluoromethane	75-71-8			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Ethylbenzene	100-41-4	1000		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Isopropylbenzene (Cumene)	98-82-8			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
m,p-Xylene	179601-23-1			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	0.2	J
Methyl Acetate	79-20-9			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120		***570***	U	***670***	U	***730***	U	***630***	U	***570***	U	***750***	U	***520***	U	***580***	U	*5*	U	*5*	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1			*570*	U	*670*	U	*730*	U	*630*	U	*570*	U	*750*	U	*520*	U	*580*	U	*5*	U	*5*	U
Methylcyclohexane	108-87-2			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Methylene Chloride	75-09-2	50		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Styrene	100-42-5			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Tert-Butyl Methyl Ether	1634-04-4	930		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Tetrachloroethylene (PCE)	127-18-4	1300		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Toluene	108-88-3	700		*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	0.28	J
Trans-1,2-Dichloroethene	156-60-5	190		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U
Trans-1,3-Dichloropropene	10061-02-6			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Trichloroethylene (TCE)	79-01-6	470		92	J	*330*	U	*370*	U	*320*	U	150	J	79	J	58	J	*290*	U	*0.5*	U	*0.5*	U
Trichlorofluoromethane	75-69-4			*280*	U	*330*	U	*370*	U	*320*	U	*290*	U	*370*	U	*260*	U	*290*	U	*0.5*	U	*0.5*	U
Vinyl Chloride	75-01-4	20		***280***	U	***330***	U	***370***	U	***320***	U	***290***	U	***370***	U	***260***	U	***290***	U	*0.5*	U	*0.5*	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-4
Area 4-1 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

			Location:	PSB-216		PSB-216 Dup		PSB-216		PSB-216		PSB-216		PSB-216		PSB-216		PSB-216		PSB-216	
			Sample Date:	3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018	
			Sample Depth (ft):	6 - 6.5		9.5 - 10		9.5 - 10		13 - 13.5		17 - 17.5		24 - 24.5		28 - 28.5		30 - 30.5		33 - 33.5	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	**7700**		630		590		650	
1,1,2,2-Tetrachloroethane	79-34-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,1,2-Trichloroethane	79-00-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,1-Dichloroethane	75-34-3	270		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	120	J	***280***	U	***330***	U	***300***	U
1,1-Dichloroethene	75-35-4	330		***380***	U	*300*	U	*310*	U	***350***	U	***380***	U	**640**		*280*	U	***330***	U	*300*	U
1,2,3-Trichlorobenzene	87-61-6			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2,4-Trichlorobenzene	120-82-1			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2,4-Trimethylbenzene	95-63-6	3600		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2-Dibromo-3-Chloropropane	96-12-8			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2-Dichlorobenzene	95-50-1	1100		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,2-Dichloroethane	107-06-2	20		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U
1,2-Dichloropropane	78-87-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,3-Dichlorobenzene	541-73-1	2400		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
1,4-Dichlorobenzene	106-46-7	1800		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
2-Hexanone	591-78-6			*760*	U	*600*	U	*620*	U	*700*	U	*750*	U	*610*	U	*550*	U	*660*	U	*600*	U
Acetone	67-64-1	50		***760***	U	***600***	U	***620***	U	***700***	U	***750***	U	***610***	U	***550***	U	***660***	U	***600***	U
Benzene	71-43-2	60		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U
Bromochloromethane	74-97-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Bromodichloromethane	75-27-4			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Bromoform	75-25-2			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Bromomethane	74-83-9			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Carbon Disulfide	75-15-0			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Carbon Tetrachloride	56-23-5	760		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Chlorobenzene	108-90-7	1100		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Chloroethane	75-00-3			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Chloroform	67-66-3	370		***380***	U	*300*	U	*310*	U	*350*	U	***380***	U	*310*	U	*280*	U	*330*	U	*300*	U
Chloromethane	74-87-3			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Cis-1,2-Dichloroethylene	156-59-2	250		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U
Cis-1,3-Dichloropropene	10061-01-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Cyclohexane	110-82-7			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Dibromochloromethane	124-48-1			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Dichlorodifluoromethane	75-71-8			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Ethylbenzene	100-41-4	1000		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Isopropylbenzene (Cumene)	98-82-8			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
m,p-Xylene	179601-23-1			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Methyl Acetate	79-20-9			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120		***760***	U	***600***	U	***620***	U	***700***	U	***750***	U	***610***	U	***550***	U	***660***	U	***600***	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1			*760*	U	*600*	U	*620*	U	*700*	U	*750*	U	*610*	U	*550*	U	*660*	U	*600*	U
Methylcyclohexane	108-87-2			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Methylene Chloride	75-09-2	50		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Styrene	100-42-5			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Tert-Butyl Methyl Ether	1634-04-4	930		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Tetrachloroethylene (PCE)	127-18-4	1300		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Toluene	108-88-3	700		*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Trans-1,2-Dichloroethene	156-60-5	190		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U
Trans-1,3-Dichloropropene	10061-02-6			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Trichloroethylene (TCE)	79-01-6	470		*380*	U	*300*	U	*310*	U	*350*	U	61	J	110	J	41	J	*330*	U	*300*	U
Trichlorofluoromethane	75-69-4			*380*	U	*300*	U	*310*	U	*350*	U	*380*	U	*310*	U	*280*	U	*330*	U	*300*	U
Vinyl Chloride	75-01-4	20		***380***	U	***300***	U	***310***	U	***350***	U	***380***	U	***310***	U	***280***	U	***330***	U	***300***	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-4
Area 4-1 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-217 Sample Date: 3/8/2018 Sample Depth (ft): 5 - 5.5		PSB-217 3/8/2018 10 - 10.5		PSB-217 3/8/2018 14 - 14.5		PSB-217 3/8/2018 16 - 16.5		PSB-217 3/8/2018 21.5 - 22		PSB-217 3/8/2018 24 - 24.5		PSB-217 3/8/2018 29 - 29.5		PSB-217 3/8/2018 32.5 - 33	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	710		60000		470000		66000		4800		4800		2600		2100	
1,1,2,2-Tetrachloroethane	79-34-5		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,1,2-Trichloroethane	79-00-5		410	U	3100	U	13000	U	90	J	340	U	360	U	340	U	370	U
1,1-Dichloroethane	75-34-3	270	410	U	3100	U	13000	U	74	J	88	J	92	J	54	J	370	U
1,1-Dichloroethene	75-35-4	330	410	U	3100	U	4100	J	490		340		290	J	340	U	100	J
1,2,3-Trichlorobenzene	87-61-6		410	U	930	J	13000	U	290	U	340	U	360	U	340	U	370	U
1,2,4-Trichlorobenzene	120-82-1		410	U	2900	J	13000	U	290	U	340	U	360	U	340	U	370	U
1,2,4-Trimethylbenzene	95-63-6	3600	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,2-Dibromo-3-Chloropropane	96-12-8		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,2-Dichlorobenzene	95-50-1	1100	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,2-Dichloroethane	107-06-2	20	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,2-Dichloropropane	78-87-5		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,3-Dichlorobenzene	541-73-1	2400	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
1,4-Dichlorobenzene	106-46-7	1800	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
2-Hexanone	591-78-6		820	U	6100	U	27000	U	570	U	690	U	710	U	690	U	740	U
Acetone	67-64-1	50	820	U	6100	U	27000	U	570	U	690	U	710	U	690	U	740	U
Benzene	71-43-2	60	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Bromochloromethane	74-97-5		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Bromodichloromethane	75-27-4		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Bromoform	75-25-2		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Bromomethane	74-83-9		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Carbon Disulfide	75-15-0		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Carbon Tetrachloride	56-23-5	760	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Chlorobenzene	108-90-7	1100	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Chloroethane	75-00-3		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Chloroform	67-66-3	370	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Chloromethane	74-87-3		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Cis-1,2-Dichloroethylene	156-59-2	250	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Cis-1,3-Dichloropropene	10061-01-5		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Cyclohexane	110-82-7		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Dibromochloromethane	124-48-1		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Dichlorodifluoromethane	75-71-8		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Ethylbenzene	100-41-4	1000	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Isopropylbenzene (Cumene)	98-82-8		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
m,p-Xylene	179601-23-1		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Methyl Acetate	79-20-9		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	820	U	6100	U	27000	U	570	U	690	U	710	U	690	U	740	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		820	U	6100	U	27000	U	570	U	690	U	710	U	690	U	740	U
Methylcyclohexane	108-87-2		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Methylene Chloride	75-09-2	50	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Styrene	100-42-5		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Tert-Butyl Methyl Ether	1634-04-4	930	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Tetrachloroethylene (PCE)	127-18-4	1300	410	U	620	J	13000	U	290	U	340	U	360	U	340	U	370	U
Toluene	108-88-3	700	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Trans-1,2-Dichloroethene	156-60-5	190	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Trans-1,3-Dichloropropene	10061-02-6		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Trichloroethylene (TCE)	79-01-6	470	4700		570000		280000		35000		280	J	1300		1600		1800	
Trichlorofluoromethane	75-69-4		410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U
Vinyl Chloride	75-01-4	20	410	U	3100	U	13000	U	290	U	340	U	360	U	340	U	370	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-4
Area 4-1 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

			Location:	PSB-218		PSB-218		PSB-218		PSB-218		PSB-218		PSB-218		PSB-218		PSB-218		TB-20180308		EB-20180308	
			Sample Date:	3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018		3/8/2018	
			Sample Depth (ft):	5.5 - 6		10.5 - 11		14.5 - 15		16.5 - 17		23 - 23.5		26.5 - 27		30 - 30.5		33 - 33.5		TB		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680		310	U	300	U	300	U	290	U	840		640		390		310		0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330		310	U	300	U	300	U	290	U	290	U	150	J	300	U	290	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
2-Hexanone	591-78-6			630	U	600	U	590	U	570	U	580	U	580	U	590	U	580	U	5	U	5	U
Acetone	67-64-1	50		630	U	600	U	590	U	570	U	580	U	580	U	590	U	580	U	5	U	3.3	J
Benzene	71-43-2	60		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Bromochloromethane	74-97-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Bromoform	75-25-2			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Bromomethane	74-83-9			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Chloroethane	75-00-3			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Chloroform	67-66-3	370		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Chloromethane	74-87-3			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250		310	U	300	U	300	U	290	U	160	J	360		420		110	J	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.4	U	0.4	U
Cyclohexane	110-82-7			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Methyl Acetate	79-20-9			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120		630	U	600	U	590	U	570	U	580	U	580	U	590	U	580	U	5	U	5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1			630	U	600	U	590	U	570	U	580	U	580	U	590	U	580	U	5	U	5	U
Methylcyclohexane	108-87-2			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Styrene	100-42-5			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Tert-Butyl Methyl Ether	1634-04-4	930		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Toluene	108-88-3	700		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.2	J
Trans-1,2-Dichloroethene	156-60-5	190		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470		310	U	69	J	230	J	160	J	1900		3400		870		340		0.5	U	0.5	U
Trichlorofluoromethane	75-69-4			310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20		310	U	300	U	300	U	290	U	290	U	290	U	300	U	290	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-4
Area 4-1 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-219		PSB-219		PSB-219 Dup		PSB-219		PSB-219		PSB-219		PSB-219		PSB-219		TB-20180307		EB-20180307	
			Sample Date: 3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018		3/7/2018	
			Sample Depth (ft): 5.5 - 6		10 - 10.5		13 - 13.5		13 - 13.5		16.5 - 17		21 - 21.5		26 - 26.5		29.5 - 30		34 - 34.5		TB		EB	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	310	U	320	U	310	U	310	U	290	U	540		420		**720**		560		0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	92	J	60	J	57	J	**780**		0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	**370**		0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	**230**	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
2-Hexanone	591-78-6		620	U	630	U	630	U	610	U	570	U	570	U	560	U	620	U	470	U	5	U	5	U
Acetone	67-64-1	50	**620**	U	**630**	U	**630**	U	**610**	U	**570**	U	**570**	U	**560**	U	**620**	U	**470**	U	5	U	5	U
Benzene	71-43-2	60	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	**230**	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Bromoform	75-25-2		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Bromomethane	74-83-9		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Chloroethane	75-00-3		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Chloroform	67-66-3	370	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Chloromethane	74-87-3		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	52	J	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.4	U	0.4	U
Cyclohexane	110-82-7		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Methyl Acetate	79-20-9		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	**620**	U	**630**	U	**630**	U	**610**	U	**570**	U	**570**	U	**560**	U	**620**	U	**470**	U	5	U	5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		620	U	630	U	630	U	610	U	570	U	570	U	560	U	620	U	470	U	5	U	5	U
Methylcyclohexane	108-87-2		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	**230**	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Styrene	100-42-5		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Tert-Butyl Methyl Ether	1634-04-4	930	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Toluene	108-88-3	700	310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.16	J
Trans-1,2-Dichloroethene	156-60-5	190	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	**230**	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470	330		**890**		**950**		**970**		400		280	U	280	U	310	U	44	J	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		310	U	320	U	310	U	310	U	290	U	280	U	280	U	310	U	230	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20	**310**	U	**320**	U	**310**	U	**310**	U	**290**	U	**280**	U	**280**	U	**310**	U	**230**	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	PSB-210		PSB-210 Dup		PSB-210		PSB-210		PSB-210		PSB-210		PSB-210		PSB-210		PSB-210	
		Sample Date:	3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018		3/9/2018	
		Sample Depth (ft):	5.5 - 6		9 - 9.5		9 - 9.5		14 - 14.5		17.5 - 18		22.5 - 23		27.5 - 28		29 - 29.5		29 - 29.5	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	300	U	300	U	300	U	290	U	310	U	**880**		**730**		91	J	100	J
1,1,2,2-Tetrachloroethane	79-34-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,1,2-Trichloroethane	79-00-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,1-Dichloroethane	75-34-3	270	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
1,1-Dichloroethene	75-35-4	330	300	U	300	U	300	U	290	U	310	U	66	J	72	J	300	U	300	U
1,2,3-Trichlorobenzene	87-61-6		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2,4-Trichlorobenzene	120-82-1		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2,4-Trimethylbenzene	95-63-6	3600	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2-Dibromo-3-Chloropropane	96-12-8		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2-Dichlorobenzene	95-50-1	1100	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,2-Dichloroethane	107-06-2	20	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
1,2-Dichloropropane	78-87-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,3-Dichlorobenzene	541-73-1	2400	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
1,4-Dichlorobenzene	106-46-7	1800	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
2-Hexanone	591-78-6		600	U	600	U	600	U	580	U	620	U	650	U	580	U	600	U	590	U
Acetone	67-64-1	50	**600**	U	**600**	U	**600**	U	**580**	U	**620**	U	**650**	U	**580**	U	**600**	U	**590**	U
Benzene	71-43-2	60	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
Bromochloromethane	74-97-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Bromodichloromethane	75-27-4		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Bromoform	75-25-2		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Bromomethane	74-83-9		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Carbon Disulfide	75-15-0		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Carbon Tetrachloride	56-23-5	760	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Chlorobenzene	108-90-7	1100	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Chloroethane	75-00-3		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Chloroform	67-66-3	370	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Chloromethane	74-87-3		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Cis-1,2-Dichloroethylene	156-59-2	250	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
Cis-1,3-Dichloropropene	10061-01-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Cyclohexane	110-82-7		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Dibromochloromethane	124-48-1		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Dichlorodifluoromethane	75-71-8		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Ethylbenzene	100-41-4	1000	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Isopropylbenzene (Cumene)	98-82-8		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
m,p-Xylene	179601-23-1		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Methyl Acetate	79-20-9		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	**600**	U	**600**	U	**600**	U	**580**	U	**620**	U	**650**	U	**580**	U	**600**	U	**590**	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		600	U	600	U	600	U	580	U	620	U	650	U	580	U	600	U	590	U
Methylcyclohexane	108-87-2		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Methylene Chloride	75-09-2	50	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Styrene	100-42-5		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Tert-Butyl Methyl Ether	1634-04-4	930	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Tetrachloroethylene (PCE)	127-18-4	1300	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Toluene	108-88-3	700	300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Trans-1,2-Dichloroethene	156-60-5	190	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U
Trans-1,3-Dichloropropene	10061-02-6		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Trichloroethylene (TCE)	79-01-6	470	300	U	300	U	300	U	290	U	310	U	330	U	71	J	39	J	44	J
Trichlorofluoromethane	75-69-4		300	U	300	U	300	U	290	U	310	U	330	U	290	U	300	U	300	U
Vinyl Chloride	75-01-4	20	**300**	U	**300**	U	**300**	U	**290**	U	**310**	U	**330**	U	**290**	U	**300**	U	**300**	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Location: / Sample Date: / Sample Depth (ft):			PSB-211 3/9/2018 6.5 - 7		PSB-211 3/9/2018 10.5 - 11		PSB-211 3/9/2018 15.5 - 16		PSB-211 3/9/2018 17 - 17.5		PSB-211 3/9/2018 23 - 23.5		PSB-211 3/9/2018 23.5 - 24		PSB-211 3/9/2018 28 - 28.5		PSB-211 3/9/2018 32 - 32.5		TB-20180309 3/9/2018 TB		EB-20180309 3/9/2018 EB	
Analyte	**Cas Number**	**NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/l**		**ug/l**	
1,1,1-Trichloroethane (TCA)	71-55-6	680	300	U	320	U	84	J	2.1E+07		12000		1200		95	J	2200		0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330	300	U	320	U	310	U	460000		440	J	280	U	280	U	160	J	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
2-Hexanone	591-78-6		610	U	630	U	620	U	660000	U	1300	U	550	U	550	U	660	U	5	U	5	U
Acetone	67-64-1	50	610	U	630	U	620	U	660000	U	1300	U	550	U	550	U	660	U	5	U	5	U
Benzene	71-43-2	60	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Bromoform	75-25-2		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Bromomethane	74-83-9		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Chloroethane	75-00-3		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Chloroform	67-66-3	370	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Chloromethane	74-87-3		300	U	320	U	310	U	460000		440	J	280	U	280	U	160	J	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Cyclohexane	110-82-7		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.05	U	0.05	U
Dichlorodifluoromethane	75-71-8		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Methyl Acetate	79-20-9		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Methylcyclohexane	108-87-2		610	U	630	U	620	U	660000	U	1300	U	550	U	550	U	660	U	5	U	5	U
Methylene Chloride	75-09-2	50	610	U	630	U	620	U	660000	U	1300	U	550	U	550	U	660	U	5	U	5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Styrene	100-42-5		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Tert-Butyl Methyl Ether	1634-04-4	930	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Toluene	108-88-3	700	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Trans-1,2-Dichloroethene	156-60-5	190	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20	300	U	320	U	310	U	330000	U	630	U	280	U	280	U	330	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Location: / Sample Date: / Sample Depth (ft):			PSB-212 3/13/2018 7 - 7.5		PSB-212 3/13/2018 10.5 - 11		PSB-212 3/13/2018 17 - 17.5		PSB-212 3/13/2018 19.5 - 20		PSB-212 3/13/2018 26 - 26.5		PSB-212 3/13/2018 27.5 - 28		PSB-212 3/13/2018 30.5 - 31		PSB-212 3/13/2018 34.5 - 35		TB-20180313 3/13/2018 TB		EB-20180313 3/13/2018 EB	
Analyte	**Cas Number**	**NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/l**		**ug/l**	
1,1,1-Trichloroethane (TCA)	71-55-6	680	320	U	290	U	120	J	30	J	200	J	**1100**		80	J	57	J	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	66	J	**290**	U	**300**	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330	320	U	290	U	**350**	U	290	U	290	U	48	J	290	U	300	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
2-Hexanone	591-78-6		640	U	590	U	690	U	580	U	580	U	510	U	590	U	600	U	5	U	5	U
Acetone	67-64-1	50	**640**	U	**590**	U	**690**	U	**580**	U	**580**	U	**510**	U	**590**	U	**600**	U	5	U	3.5	J
Benzene	71-43-2	60	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Bromoform	75-25-2		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Bromomethane	74-83-9		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Chloroethane	75-00-3		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Chloroform	67-66-3	370	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Chloromethane	74-87-3		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.4	U	0.4	U
Cyclohexane	110-82-7		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.1	J
Isopropylbenzene (Cumene)	98-82-8		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.42	J
Methyl Acetate	79-20-9		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	**640**	U	**590**	U	**690**	U	**580**	U	**580**	U	**510**	U	**590**	U	**600**	U	5	U	5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		640	U	590	U	690	U	580	U	580	U	510	U	590	U	600	U	5	U	5	U
Methylcyclohexane	108-87-2		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Styrene	100-42-5		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.18	J
Tert-Butyl Methyl Ether	1634-04-4	930	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Toluene	108-88-3	700	320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.52	
Trans-1,2-Dichloroethene	156-60-5	190	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470	320	U	290	U	350	U	290	U	53	J	280		45	J	59	J	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		320	U	290	U	350	U	290	U	290	U	250	U	290	U	300	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20	**320**	U	**290**	U	**350**	U	**290**	U	**290**	U	**250**	U	**290**	U	**300**	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	PSB-213		PSB-213		PSB-213		PSB-213		PSB-213		PSB-213		PSB-213		PSB-213	
		Sample Date:	3/12/2018		3/12/2018		3/12/2018		3/12/2018		3/12/2018		3/12/2018		3/12/2018		3/12/2018	
		Sample Depth (ft):	6 - 6.5		10 - 10.5		15.5 - 16		19.5 - 20		23.5 - 24		27 - 27.5		30 - 30.5		34 - 34.5	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*340*	*U*	*300*	*U*	*320*	*U*	**1E+06**		**950**		*260*	*U*	**22000**		*290*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,1,2-Trichloroethane	79-00-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,1-Dichloroethane	75-34-3	270	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	160	J	*260*	*U*	**520**		***290***	*U*
1,1-Dichloroethene	75-35-4	330	***340***	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	120	J	*260*	*U*	200	J	*290*	*U*
1,2,3-Trichlorobenzene	87-61-6		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2,4-Trichlorobenzene	120-82-1		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,2-Dichloroethane	107-06-2	20	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*
1,2-Dichloropropane	78-87-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
2-Hexanone	591-78-6		*680*	*U*	*600*	*U*	*640*	*U*	*66000*	*U*	*640*	*U*	*520*	*U*	*690*	*U*	*580*	*U*
Acetone	67-64-1	50	***680***	*U*	***600***	*U*	***640***	*U*	***66000***	*U*	***640***	*U*	***520***	*U*	***690***	*U*	***580***	*U*
Benzene	71-43-2	60	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*
Bromochloromethane	74-97-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Bromodichloromethane	75-27-4		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Bromoform	75-25-2		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Bromomethane	74-83-9		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Carbon Disulfide	75-15-0		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Carbon Tetrachloride	56-23-5	760	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Chlorobenzene	108-90-7	1100	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Chloroethane	75-00-3		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Chloroform	67-66-3	370	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Chloromethane	74-87-3		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*
Cis-1,3-Dichloropropene	10061-01-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Cyclohexane	110-82-7		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Dibromochloromethane	124-48-1		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Dichlorodifluoromethane	75-71-8		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Ethylbenzene	100-41-4	1000	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Isopropylbenzene (Cumene)	98-82-8		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
m,p-Xylene	179601-23-1		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Methyl Acetate	79-20-9		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***680***	*U*	***600***	*U*	***640***	*U*	***66000***	*U*	***640***	*U*	***520***	*U*	***690***	*U*	***580***	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*680*	*U*	*600*	*U*	*640*	*U*	*66000*	*U*	*640*	*U*	*520*	*U*	*690*	*U*	*580*	*U*
Methylcyclohexane	108-87-2		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Methylene Chloride	75-09-2	50	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Styrene	100-42-5		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Toluene	108-88-3	700	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*
Trans-1,3-Dichloropropene	10061-02-6		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Trichloroethylene (TCE)	79-01-6	470	*340*	*U*	*300*	*U*	*320*	*U*	***33000***	*U*	150	J	*260*	*U*	*350*	*U*	*290*	*U*
Trichlorofluoromethane	75-69-4		*340*	*U*	*300*	*U*	*320*	*U*	*33000*	*U*	*320*	*U*	*260*	*U*	*350*	*U*	*290*	*U*
Vinyl Chloride	75-01-4	20	***340***	*U*	***300***	*U*	***320***	*U*	***33000***	*U*	***320***	*U*	***260***	*U*	***350***	*U*	***290***	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Location: / Sample Date: / Sample Depth (ft):			PSB-214 3/12/2018 6 - 6.5		PSB-214 3/12/2018 11 - 11.5		PSB-214 Dup 3/12/2018 15.5 - 16		PSB-214 3/12/2018 15.5 - 16		PSB-214 3/12/2018 19.5 - 20		PSB-214 3/12/2018 23.5 - 24		PSB-214 3/12/2018 27.5 - 28		PSB-214 3/12/2018 30 - 30.5		PSB-214 3/12/2018 34.5 - 35		TB-20180312 3/12/2018 TB		EB-20180312 3/12/2018 EB	
Analyte	**Cas Number**	**NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/l**		**ug/l**	
1,1,1-Trichloroethane (TCA)	71-55-6	680	290	U	300	U	340	U	310	U	140	J	**16000**		**2700**		**1600**		580		0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270	**290**	U	**300**	U	**340**	U	**310**	U	170	J	**710**		120	J	69	J	**300**	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330	290	U	300	U	**340**	U	310	U	190	J	**600**		160	J	280	U	61	J	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20	**290**	U	**300**	U	**340**	U	**310**	U	**330**	U	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
2-Hexanone	591-78-6		580	U	590	U	670	U	630	U	650	U	560	U	490	U	560	U	600	U	5	U	5	U
Acetone	67-64-1	50	**580**	U	**590**	U	**670**	U	**630**	U	**650**	U	**560**	U	**490**	U	**560**	U	**600**	U	5	U	5	U
Benzene	71-43-2	60	**290**	U	**300**	U	**340**	U	**310**	U	**330**	U	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Bromoform	75-25-2		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Bromomethane	74-83-9		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Chloroethane	75-00-3		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Chloroform	67-66-3	370	290	U	300	U	340	U	310	U	330	U	67	J	250	U	280	U	300	U	0.5	U	0.5	U
Chloromethane	74-87-3		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250	**290**	U	**300**	U	**340**	U	**310**	U	71	J	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.4	U	0.4	U
Cyclohexane	110-82-7		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.31	J
Methyl Acetate	79-20-9		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	**580**	U	**590**	U	**670**	U	**630**	U	**650**	U	**560**	U	**490**	U	**560**	U	**600**	U	5	U	5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		580	U	590	U	670	U	630	U	650	U	560	U	490	U	560	U	600	U	5	U	5	U
Methylcyclohexane	108-87-2		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50	**290**	U	**300**	U	**340**	U	**310**	U	**330**	U	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Styrene	100-42-5		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.16	J
Tert-Butyl Methyl Ether	1634-04-4	930	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	1300	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Toluene	108-88-3	700	290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.38	J
Trans-1,2-Dichloroethene	156-60-5	190	**290**	U	**300**	U	**340**	U	**310**	U	**330**	U	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470	290	U	300	U	340	U	310	U	370		170	J	66	J	280	U	300	U	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		290	U	300	U	340	U	310	U	330	U	280	U	250	U	280	U	300	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20	**290**	U	**300**	U	**340**	U	**310**	U	**330**	U	**280**	U	**250**	U	**280**	U	**300**	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	ASB-5		ASB-5		ASB-5		ASB-5		ASB-5		ASB-5		ASB-5		ASB-5		ASB-5	
		Sample Date:	2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019	
		Sample Depth (ft):	6 - 6.5		7.5 - 8		11 - 11.5		14 - 14.5		17 - 17.5		21 - 21.5		23 - 23.5		30.5 - 31		34 - 34.5	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*5*	*U*	*5*	*U*	*5.1*	*U*	2.5	J	2	J-	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,1,2-Trichloroethane	79-00-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,1-Dichloroethane	75-34-3	270	*5*	*U*	*5*	*U*	*5.1*	*U*	6.3		8.9		3.4	J	3.4	J	*4.5*	*U*	*5.3*	*U*
1,1-Dichloroethene	75-35-4	330	*5*	*U*	*5*	*U*	*5.1*	*U*	6	J-	6.3	J-	3.2	J	2.7	J	*4.5*	*U*	*5.3*	*U*
1,2,3-Trichlorobenzene	87-61-6		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2,4-Trichlorobenzene	120-82-1		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2-Dichloroethane	107-06-2	20	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,2-Dichloropropane	78-87-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*UJ*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
2-Hexanone	591-78-6		*10*	*U*	*9.9*	*U*	*10*	*U*	*9.8*	*U*	*11*	*U*	*10*	*U*	*10*	*U*	*9*	*U*	*11*	*U*
Acetone	67-64-1	50	*10*	*U*	17		*10*	*U*	*9.8*	*U*	*11*	*U*	*10*	*U*	*10*	*U*	8.8	J	*11*	*U*
Benzene	71-43-2	60	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Bromochloromethane	74-97-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Bromodichloromethane	75-27-4		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*UJ*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Bromoform	75-25-2		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Bromomethane	74-83-9		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Carbon Disulfide	75-15-0		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	1.6	J	*5.3*	*U*
Carbon Tetrachloride	56-23-5	760	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Chlorobenzene	108-90-7	1100	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Chloroethane	75-00-3		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Chloroform	67-66-3	370	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Chloromethane	74-87-3		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	*5*	*U*	*5*	*U*	43		160	J-	240	J-	82		85		74		6.7	
Cis-1,3-Dichloropropene	10061-01-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Cyclohexane	110-82-7		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*UJ*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Dibromochloromethane	124-48-1		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Dichlorodifluoromethane	75-71-8		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Ethylbenzene	100-41-4	1000	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Isopropylbenzene (Cumene)	98-82-8		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
m,p-Xylene	179601-23-1		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Methyl Acetate	79-20-9		*5*	*U*	*5*	*U*	*5.1*	*U*	6.3		8.9		3.4	J	3.4	J	*4.5*	*U*	*5.3*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*5*	*U*	*5*	*U*	*5.1*	*U*	6	J-	6.3	J-	3.2	J	2.7	J	*4.5*	*U*	*5.3*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Methylcyclohexane	108-87-2		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Methylene Chloride	75-09-2	50	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Styrene	100-42-5		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Toluene	108-88-3	700	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*UJ*	*5.3*	*UJ*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Trichloroethylene (TCE)	79-01-6	470	*5*	*U*	*5*	*U*	*5.1*	*U*	*4.9*	*U*	*5.3*	*U*	*5.1*	*U*	*5*	*U*	*4.5*	*U*	*5.3*	*U*
Trichlorofluoromethane	75-69-4		*10*	*U*	*9.9*	*U*	*10*	*U*	*9.8*	*U*	*11*	*U*	*10*	*U*	*10*	*U*	*9*	*U*	*11*	*U*
Vinyl Chloride	75-01-4	20	*10*	*U*	17		*10*	*U*	*9.8*	*U*	*11*	*U*	*10*	*U*	*10*	*U*	8.8	J	*11*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Location:			ASB-6		ASB-6		ASB-6		ASB-6		ASB-6		ASB-6 DUP		ASB-6		ASB-6		ASB-6		EB-20190227		TB-20190227	
Sample Date:			2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019	
Sample Depth (ft):			7 - 7.5		8.5 - 9		11.5 - 12		14 - 14.5		18 - 18.5		18 - 18.5		26.5 - 27		30 - 30.5		34.5 - 35		EB		TB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	6		8.3		8.4		2.6	J	2	J	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	4	J	4.2	J	5.2		*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*9.6*	*U*	*9.8*	*U*	*9.8*	*U*	*9.9*	*U*	*9.6*	*U*	*10*	*U*	*10*	*U*	*11*	*U*	*8.7*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	*9.6*	*U*	*9.8*	*U*	*9.8*	*U*	11		21		15		9.9	J	11		10		*5*	*U*	*5*	*U*
Benzene	71-43-2	60	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*5*	*U*	*5*	*U*
Bromochloromethane	74-97-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*5*	*U*	*5*	*U*
Bromodichloromethane	75-27-4		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	5.1	J	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	8		20		8.1		100		15		19		**570**		**250**	J	55		*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	0.12	J	*0.5*	*U*
Cyclohexane	110-82-7		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.4*	*U*	*0.4*	*U*
Dichlorodifluoromethane	75-71-8		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Isopropylbenzene (Cumene)	98-82-8		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Acetate	79-20-9		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*9.6*	*U*	*9.8*	*U*	*9.8*	*U*	*9.9*	*U*	*9.6*	*U*	*10*	*U*	*10*	*U*	*11*	*U*	*8.7*	*U*	0.19	J	*0.5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*9.6*	*U*	*9.8*	*U*	*9.8*	*U*	*9.9*	*U*	*9.6*	*U*	*10*	*U*	*10*	*U*	*11*	*U*	*8.7*	*U*	*0.5*	*U*	*0.5*	*U*
Methylcyclohexane	108-87-2		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Styrene	100-42-5		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	0.2	J	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	1.1		*0.5*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	1.4	J	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	3.7	J	9.5		5.9		28		5		6.4		3.9	J	2.6	J	3.7	J	*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*5.1*	*U*	*5.4*	*U*	*4.4*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	*4.8*	*U*	*4.9*	*U*	*4.9*	*U*	*5*	*U*	3	J	4.3	J	**26**		15		4.4		*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-5
Area 4-2 - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	ASB-7		ASB-7		ASB-7		ASB-7		ASB-7		ASB-7		ASB-7		EB-20190226		TB-20190226	
		Sample Date:	2/26/2019		2/26/2019		2/26/2019		2/26/2019		2/26/2019		2/26/2019		2/26/2019		2/26/2019		2/26/2019	
		Sample Depth (ft):	5 - 5.5		8 - 8.5		12 - 12.5		17 - 17.5		23 - 23.5		31 - 31.5		33.5 - 34		EB		TB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	79		16		12		**13000**	D	4.1	J	4.5	J	22		*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	95		2.3	J	2.4	J	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	35		*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	33	J+	*6.2*	*UJ*	2.1	J	**1600**	J	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	*3100*	*U*	64		*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	*3100*	*U*	740		*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*UJ*	*3100*	*U*	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*11*	*U*	*12*	*U*	*8.9*	*U*	*6100*	*U*	*10*	*U*	*9.7*	*U*	*10*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	**53**		11	J	19		***6100***	*U*	*10*	*U*	9.1	J	11		*5*	*U*	*5*	*U*
Benzene	71-43-2	60	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*5.4*	*U*	*6.2*	*U*	*4.4*	*UJ*	*3100*	*U*	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	0.18	J	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	**13000**		130	J-	99		***3100***	*U*	*5.1*	*UJ*	2	J	2.7	J	*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.4*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*5.4*	*U*	*6.2*	*U*	*4.4*	*UJ*	*3100*	*U*	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	4.9	J	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Isopropylbenzene (Cumene)	98-82-8		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		15		*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	0.16	J	*0.5*	*U*
Methyl Acetate	79-20-9		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*11*	*U*	*12*	*U*	*8.9*	*U*	***6100***	*U*	*10*	*U*	*9.7*	*U*	*10*	*U*	*5*	*U*	*5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*11*	*U*	*12*	*U*	*8.9*	*U*	*6100*	*U*	*10*	*U*	*9.7*	*U*	*10*	*U*	*5*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		5.3	J	*6.2*	*U*	*4.4*	*UJ*	*3100*	*U*	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	25		*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		6		*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Styrene	100-42-5		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	0.19	J	*0.5*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*5.4*	*U*	3.6	J	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	40		*6.2*	*U*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	1.1		*0.5*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	**190**	J+	2.8	J-	5.1		***3100***	*U*	*5.1*	*UJ*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	35		**860**		130		**68000**	D	28		4.8		9.1		*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*5.4*	*U*	*6.2*	*U*	*4.4*	*U*	*3100*	*U*	*5.1*	*U*	*4.8*	*U*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	*5.4*	*U*	*6.2*	*UJ*	*4.4*	*U*	***3100***	*U*	*5.1*	*U*	*4.8*	*UJ*	*5.1*	*U*	*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-205 Sample Date: 3/13/2018 Sample Depth (ft): 7 - 7.5		PSB-205 3/13/2018 11 - 11.5		PSB-205 3/13/2018 13.5 - 14		PSB-205 3/13/2018 17.5 - 18		PSB-205 3/13/2018 21.5 - 22		PSB-205 3/13/2018 26.5 - 27		PSB-205 3/13/2018 31.5 - 32		PSB-205 3/13/2018 34.5 - 35		TB-20180313 3/13/2018 TB		EB-20180313 3/13/2018 EB	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	38	J	*330*	*U*	110	J	220	J	**1400**		27	J	36	J	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	64	J	53	J	79	J	***350***	*U*	110	J	*250*	*U*	***270***	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	74	J	***330***	*U*	110	J	130	J	**660**		*250*	*U*	41	J	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	***360***	*U*	***330***	*U*	***300***	*U*	***350***	*U*	***310***	*U*	***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*730*	*U*	*660*	*U*	*610*	*U*	*700*	*U*	*610*	*U*	*490*	*U*	*540*	*U*	*520*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	***730***	*U*	***660***	*U*	***610***	*U*	***700***	*U*	***610***	*U*	***490***	*U*	***540***	*U*	***520***	*U*	*5*	*U*	3.5	J
Benzene	71-43-2	60	***360***	*U*	***330***	*U*	***300***	*U*	***350***	*U*	***310***	*U*	***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	**2500**		**1600**		**2200**		**960**		**1300**		***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.4*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	0.1	J
Isopropylbenzene (Cumene)	98-82-8		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	0.42	J
Methyl Acetate	79-20-9		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***730***	*U*	***660***	*U*	***610***	*U*	***700***	*U*	***610***	*U*	***490***	*U*	***540***	*U*	***520***	*U*	*5*	*U*	*5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*730*	*U*	*660*	*U*	*610*	*U*	*700*	*U*	*610*	*U*	*490*	*U*	*540*	*U*	*520*	*U*	*5*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	***360***	*U*	***330***	*U*	***300***	*U*	***350***	*U*	***310***	*U*	***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Styrene	100-42-5		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	0.18	J
Tert-Butyl Methyl Ether	1634-04-4	930	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	0.52	
Trans-1,2-Dichloroethene	156-60-5	190	83	J	38	J	48	J	***350***	*U*	***310***	*U*	***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	**720**		330		**1600**		**2700**		**4400**		140	J	40	J	38	J	*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*360*	*U*	*330*	*U*	*300*	*U*	*350*	*U*	*310*	*U*	*250*	*U*	*270*	*U*	*260*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	***360***	*U*	***330***	*U*	***300***	*U*	***350***	*U*	***310***	*U*	***250***	*U*	***270***	*U*	***260***	*U*	*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-206 Sample Date: 3/14/2018 Sample Depth (ft): 7.5 - 8		PSB-206 3/14/2018 8.5 - 9		PSB-206 3/14/2018 14 - 14.5		PSB-206 3/14/2018 17.5 - 18		TB-20180314 3/14/2018 TB		EB-20180314 3/14/2018 EB		PSB-206 3/15/2018 23.5 - 24		PSB-206 3/15/2018 21.5 - 22		PSB-206 3/15/2018 32 - 32.5		PSB-206 3/15/2018 34.5 - 35	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	1200		8300		12000		73000		0.5	U	0.5	U	80000		42000		75	J	130	J
1,1,2,2-Tetrachloroethane	79-34-5		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,1,2-Trichloroethane	79-00-5		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,1-Dichloroethane	75-34-3	270	270	J	1100	J	3000	U	6400	U	0.5	U	0.5	U	630	J	1400	U	360	U	250	U
1,1-Dichloroethene	75-35-4	330	400		2600		4300		17000		0.5	U	0.5	U	15000		13000		360	U	55	J
1,2,3-Trichlorobenzene	87-61-6		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,2,4-Trichlorobenzene	120-82-1		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,2,4-Trimethylbenzene	95-63-6	3600	300	U	1600	U	3000	U	6400	U	0.5	U	0.17	J	3400	U	1400	U	360	U	250	U
1,2-Dibromo-3-Chloropropane	96-12-8		300	U	1600	U	3000	U	6400	U	0.05	U	0.05	U	3400	U	1400	U	360	U	250	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,2-Dichlorobenzene	95-50-1	1100	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,2-Dichloroethane	107-06-2	20	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,2-Dichloropropane	78-87-5		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,3-Dichlorobenzene	541-73-1	2400	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
1,4-Dichlorobenzene	106-46-7	1800	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
2-Hexanone	591-78-6		600	U	3200	U	6000	U	13000	U	5	U	5	U	6700	U	2700	U	720	U	500	U
Acetone	67-64-1	50	600	U	3200	U	6000	U	13000	U	5	U	23		6700	U	2700	U	720	U	500	U
Benzene	71-43-2	60	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Bromochloromethane	74-97-5		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Bromodichloromethane	75-27-4		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Bromoform	75-25-2		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Bromomethane	74-83-9		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Carbon Disulfide	75-15-0		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Carbon Tetrachloride	56-23-5	760	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Chlorobenzene	108-90-7	1100	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Chloroethane	75-00-3		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Chloroform	67-66-3	370	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Chloromethane	74-87-3		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Cis-1,2-Dichloroethylene	156-59-2	250	6900		34000		8600		1300	J	0.5	U	0.5	U	400	J	180	J	360	U	250	U
Cis-1,3-Dichloropropene	10061-01-5		300	U	1600	U	3000	U	6400	U	0.4	U	0.4	U	3400	U	1400	U	360	U	250	U
Cyclohexane	110-82-7		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Dibromochloromethane	124-48-1		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Dichlorodifluoromethane	75-71-8		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Ethylbenzene	100-41-4	1000	300	U	1600	U	3000	U	6400	U	0.5	U	0.23	J	3400	U	1400	U	360	U	250	U
Isopropylbenzene (Cumene)	98-82-8		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
m,p-Xylene	179601-23-1		300	U	1600	U	3000	U	6400	U	0.5	U	0.91		3400	U	1400	U	360	U	250	U
Methyl Acetate	79-20-9		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Methylcyclohexane	108-87-2		270	J	1100	J	3000	U	6400	U	0.5	U	0.5	U	630	J	1400	U	360	U	250	U
Methylene Chloride	75-09-2	50	400		2600		4300		17000		0.5	U	0.5	U	15000		13000		360	U	55	J
o-Xylene (1,2-Dimethylbenzene)	95-47-6		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Styrene	100-42-5		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Tert-Butyl Methyl Ether	1634-04-4	930	300	U	1600	U	3000	U	6400	U	0.5	U	0.17	J	3400	U	1400	U	360	U	250	U
Tetrachloroethylene (PCE)	127-18-4	1300	300	U	1600	U	3000	U	6400	U	0.05	U	0.05	U	3400	U	1400	U	360	U	250	U
Toluene	108-88-3	700	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Trans-1,2-Dichloroethene	156-60-5	190	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Trans-1,3-Dichloropropene	10061-02-6		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Trichloroethylene (TCE)	79-01-6	470	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Trichlorofluoromethane	75-69-4		300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U
Vinyl Chloride	75-01-4	20	300	U	1600	U	3000	U	6400	U	0.5	U	0.5	U	3400	U	1400	U	360	U	250	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: / Sample Date: / Sample Depth (ft):	TB-20180315 3/15/2018 TB		EB-20180315 3/15/2018 EB		PSB-207 3/16/2018 7 - 7.5		PSB-207 3/16/2018 11 - 11.5		PSB-207 Dup 3/16/2018 14 - 14.5		PSB-207 3/16/2018 14 - 14.5		PSB-207 3/16/2018 19 - 19.5		TB-20180316 3/16/2018 TB		EB-20180316 3/16/2018 EB		PSB-208 3/14/2018 7 - 7.5	
				ug/l		ug/l		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,1,2,2-Tetrachloroethane	79-34-5			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,1,2-Trichloroethane	79-00-5			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,1-Dichloroethane	75-34-3	270		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
1,1-Dichloroethene	75-35-4	330		0.5	U	0.5	U	**330**	U	300	U	310	U	310	U	**330**	U	0.5	U	0.5	U	**340**	U
1,2,3-Trichlorobenzene	87-61-6			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,2,4-Trichlorobenzene	120-82-1			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,2,4-Trimethylbenzene	95-63-6	3600		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,2-Dibromo-3-Chloropropane	96-12-8			0.05	U	0.05	U	330	U	300	U	310	U	310	U	330	U	0.05	U	0.05	U	340	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,2-Dichlorobenzene	95-50-1	1100		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,2-Dichloroethane	107-06-2	20		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
1,2-Dichloropropane	78-87-5			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,3-Dichlorobenzene	541-73-1	2400		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
1,4-Dichlorobenzene	106-46-7	1800		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
2-Hexanone	591-78-6			5	U	5	U	650	U	600	U	620	U	610	U	650	U	5	U	5	U	690	U
Acetone	67-64-1	50		5	U	11		**650**	U	**600**	U	**620**	U	**610**	U	**650**	U	5	U	22		**690**	U
Benzene	71-43-2	60		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
Bromochloromethane	74-97-5			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Bromodichloromethane	75-27-4			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Bromoform	75-25-2			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Bromomethane	74-83-9			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Carbon Disulfide	75-15-0			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Carbon Tetrachloride	56-23-5	760		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Chlorobenzene	108-90-7	1100		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Chloroethane	75-00-3			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Chloroform	67-66-3	370		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Chloromethane	74-87-3			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Cis-1,2-Dichloroethylene	156-59-2	250		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
Cis-1,3-Dichloropropene	10061-01-5			0.4	U	0.4	U	330	U	300	U	310	U	310	U	330	U	0.4	U	0.4	U	340	U
Cyclohexane	110-82-7			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Dibromochloromethane	124-48-1			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Dichlorodifluoromethane	75-71-8			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Ethylbenzene	100-41-4	1000		0.5	U	0.17	J	330	U	300	U	310	U	310	U	330	U	0.5	U	0.17	J	340	U
Isopropylbenzene (Cumene)	98-82-8			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
m,p-Xylene	179601-23-1			0.5	U	0.7		330	U	300	U	310	U	310	U	330	U	0.5	U	0.6		340	U
Methyl Acetate	79-20-9			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120		5	U	6.4		**650**	U	**600**	U	**620**	U	**610**	U	**650**	U	5	U	2.2	J	**690**	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1			5	U	5	U	650	U	600	U	620	U	610	U	650	U	5	U	5	U	690	U
Methylcyclohexane	108-87-2			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Methylene Chloride	75-09-2	50		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6			0.5	U	0.28	J	330	U	300	U	310	U	310	U	330	U	0.5	U	0.23	J	340	U
Styrene	100-42-5			0.5	U	0.28	J	330	U	300	U	310	U	310	U	330	U	0.5	U	0.3	J	340	U
Tert-Butyl Methyl Ether	1634-04-4	930		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Tetrachloroethylene (PCE)	127-18-4	1300		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Toluene	108-88-3	700		0.5	U	1.6		330	U	300	U	310	U	310	U	330	U	0.5	U	0.87		340	U
Trans-1,2-Dichloroethene	156-60-5	190		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U
Trans-1,3-Dichloropropene	10061-02-6			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Trichloroethylene (TCE)	79-01-6	470		0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Trichlorofluoromethane	75-69-4			0.5	U	0.5	U	330	U	300	U	310	U	310	U	330	U	0.5	U	0.5	U	340	U
Vinyl Chloride	75-01-4	20		0.5	U	0.5	U	**330**	U	**300**	U	**310**	U	**310**	U	**330**	U	0.5	U	0.5	U	**340**	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	Location: PSB-208		PSB-208		PSB-208		PSB-208		PSB-208		PSB-208		PSB-208		PSB-209		PSB-209 Dup		PSB-209	
			Sample Date: 3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018	
			Sample Depth (ft): 10 - 10.5		15.5 - 16		20 - 20.5		23.5 - 24		27.5 - 28		31.5 - 32		33 - 33.5		6 - 6.5		11.5 - 12		11.5 - 12	
			ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	230	J	51	J	94	J	*340*	*U*	*330*	*U*	*320*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,1,2-Trichloroethane	79-00-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,1-Dichloroethane	75-34-3	270	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
1,1-Dichloroethene	75-35-4	330	*310*	*U*	*310*	*U*	*290*	*U*	***380***	*U*	66	J	***350***	*U*	*310*	*U*	***340***	*U*	***330***	*U*	*320*	*U*
1,2,3-Trichlorobenzene	87-61-6		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2,4-Trichlorobenzene	120-82-1		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,2-Dichloroethane	107-06-2	20	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
1,2-Dichloropropane	78-87-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
2-Hexanone	591-78-6		*620*	*U*	*620*	*U*	*590*	*U*	*760*	*U*	*700*	*U*	*700*	*U*	*630*	*U*	*670*	*U*	*660*	*U*	*640*	*U*
Acetone	67-64-1	50	***620***	*U*	***620***	*U*	***590***	*U*	***760***	*U*	***700***	*U*	***700***	*U*	***630***	*U*	***670***	*U*	***660***	*U*	***640***	*U*
Benzene	71-43-2	60	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
Bromochloromethane	74-97-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Bromodichloromethane	75-27-4		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Bromoform	75-25-2		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Bromomethane	74-83-9		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Carbon Disulfide	75-15-0		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Carbon Tetrachloride	56-23-5	760	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Chlorobenzene	108-90-7	1100	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Chloroethane	75-00-3		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Chloroform	67-66-3	370	*310*	*U*	*310*	*U*	*290*	*U*	***380***	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Chloromethane	74-87-3		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
Cis-1,3-Dichloropropene	10061-01-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Cyclohexane	110-82-7		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Dibromochloromethane	124-48-1		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Dichlorodifluoromethane	75-71-8		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Ethylbenzene	100-41-4	1000	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Isopropylbenzene (Cumene)	98-82-8		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
m,p-Xylene	179601-23-1		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Methyl Acetate	79-20-9		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***620***	*U*	***620***	*U*	***590***	*U*	***760***	*U*	***700***	*U*	***700***	*U*	***630***	*U*	***670***	*U*	***660***	*U*	***640***	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*620*	*U*	*620*	*U*	*590*	*U*	*760*	*U*	*700*	*U*	*700*	*U*	*630*	*U*	*670*	*U*	*660*	*U*	*640*	*U*
Methylcyclohexane	108-87-2		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Methylene Chloride	75-09-2	50	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Styrene	100-42-5		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Toluene	108-88-3	700	*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*
Trans-1,3-Dichloropropene	10061-02-6		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Trichloroethylene (TCE)	79-01-6	470	*310*	*U*	*310*	*U*	*290*	*U*	97	J	290	J	76	J	58	J	*340*	*U*	*330*	*U*	*320*	*U*
Trichlorofluoromethane	75-69-4		*310*	*U*	*310*	*U*	*290*	*U*	*380*	*U*	*350*	*U*	*350*	*U*	*310*	*U*	*340*	*U*	*330*	*U*	*320*	*U*
Vinyl Chloride	75-01-4	20	***310***	*U*	***310***	*U*	***290***	*U*	***380***	*U*	***350***	*U*	***350***	*U*	***310***	*U*	***340***	*U*	***330***	*U*	***320***	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	PSB-209		PSB-209		PSB-209		PSB-209		PSB-209		PSB-209		TB-20180314		EB-20180314		CB-220		CB-220	
		Sample Date:	3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/14/2018		3/16/2018		3/16/2018	
		Sample Depth (ft):	15.5 - 16		19 - 19.5		23.5 - 24		27 - 27.5		31 - 31.5		33.5 - 34		TB		EB		6.5 - 7		11.5 - 12	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*420*	*U*	*360*	*U*	*270*	*U*	55	J	46	J	*320*	*U*	*0.5*	*U*	*0.5*	*U*	63	J	62	J
1,1,2,2-Tetrachloroethane	79-34-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,1,2-Trichloroethane	79-00-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,1-Dichloroethane	75-34-3	270	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	78	J	82	J
1,1-Dichloroethene	75-35-4	330	***420***	*U*	***360***	*U*	*270*	*U*	*320*	*U*	***330***	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	150	J	180	J
1,2,3-Trichlorobenzene	87-61-6		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,2,4-Trichlorobenzene	120-82-1		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	0.17	J	*320*	*U*	*320*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.05*	*U*	*0.05*	*U*	*320*	*U*	*320*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,2-Dichloroethane	107-06-2	20	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	***320***	*U*	***320***	*U*
1,2-Dichloropropane	78-87-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
2-Hexanone	591-78-6		*830*	*U*	*720*	*U*	*540*	*U*	*640*	*U*	*670*	*U*	*630*	*U*	*5*	*U*	*5*	*U*	*650*	*U*	*640*	*U*
Acetone	67-64-1	50	***830***	*U*	***720***	*U*	***540***	*U*	***640***	*U*	***670***	*U*	***630***	*U*	*5*	*U*	23		***650***	*U*	***640***	*U*
Benzene	71-43-2	60	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	***320***	*U*	***320***	*U*
Bromochloromethane	74-97-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Bromodichloromethane	75-27-4		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Bromoform	75-25-2		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Bromomethane	74-83-9		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Carbon Disulfide	75-15-0		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Carbon Tetrachloride	56-23-5	760	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Chlorobenzene	108-90-7	1100	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Chloroethane	75-00-3		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Chloroform	67-66-3	370	***420***	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Chloromethane	74-87-3		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	***420***	*U*	***360***	*U*	***270***	*U*	120	J	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	**1800**		**2100**	
Cis-1,3-Dichloropropene	10061-01-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.4*	*U*	*0.4*	*U*	*320*	*U*	*320*	*U*
Cyclohexane	110-82-7		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Dibromochloromethane	124-48-1		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Dichlorodifluoromethane	75-71-8		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Ethylbenzene	100-41-4	1000	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	0.23	J	*320*	*U*	*320*	*U*
Isopropylbenzene (Cumene)	98-82-8		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
m,p-Xylene	179601-23-1		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	0.91		*320*	*U*	*320*	*U*
Methyl Acetate	79-20-9		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	4.4		*320*	*U*	*320*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	***830***	*U*	***720***	*U*	***540***	*U*	***640***	*U*	***670***	*U*	***630***	*U*	*5*	*U*	2.5	J	***650***	*U*	***640***	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*830*	*U*	*720*	*U*	*540*	*U*	*640*	*U*	*670*	*U*	*630*	*U*	*5*	*U*	*5*	*U*	*650*	*U*	*640*	*U*
Methylcyclohexane	108-87-2		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Methylene Chloride	75-09-2	50	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	***320***	*U*	***320***	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	0.37	J	*320*	*U*	*320*	*U*
Styrene	100-42-5		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	0.5		*320*	*U*	*320*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Toluene	108-88-3	700	*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	1.3		*320*	*U*	*320*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	45	J	***320***	*U*
Trans-1,3-Dichloropropene	10061-02-6		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Trichloroethylene (TCE)	79-01-6	470	*420*	*U*	*360*	*U*	170	J	190	J	120	J	*320*	*U*	*0.5*	*U*	*0.5*	*U*	**710**		**680**	
Trichlorofluoromethane	75-69-4		*420*	*U*	*360*	*U*	*270*	*U*	*320*	*U*	*330*	*U*	*320*	*U*	*0.5*	*U*	*0.5*	*U*	*320*	*U*	*320*	*U*
Vinyl Chloride	75-01-4	20	***420***	*U*	***360***	*U*	***270***	*U*	***320***	*U*	***330***	*U*	***320***	*U*	*0.5*	*U*	*0.5*	*U*	***320***	*U*	***320***	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

			Location:	CB-220		CB-220		CB-220		CB-220		CB-220		CB-220		TB-20180316		EB-20180316	
			Sample Date:	3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018		3/16/2018	
			Sample Depth (ft):	12 - 12.5		14.5 - 15		25 - 25.5		27.5 - 28		29.5 - 30		33.5 - 34		TB		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	44	J	310	U	400	U	260	U	81	J	310	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3	270	57	J	100	J	**400**	U	260	U	**320**	U	**310**	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	330	140	J	210	J	**400**	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	87-61-6		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6	3600	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	96-12-8		350	U	310	U	400	U	260	U	320	U	310	U	0.05	U	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	1100	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	20	**350**	U	**310**	U	**400**	U	**260**	U	**320**	U	**310**	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,3-Dichlorobenzene	541-73-1	2400	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	1800	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
2-Hexanone	591-78-6		710	U	620	U	800	U	530	U	640	U	620	U	5	U	5	U
Acetone	67-64-1	50	**710**	U	**620**	U	**800**	U	**530**	U	**640**	U	**620**	U	5	U	22	
Benzene	71-43-2	60	**350**	U	**310**	U	**400**	U	**260**	U	**320**	U	**310**	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Bromoform	75-25-2		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Bromomethane	74-83-9		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Carbon Disulfide	75-15-0		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	760	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	1100	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Chloroethane	75-00-3		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Chloroform	67-66-3	370	350	U	310	U	**400**	U	260	U	320	U	310	U	0.5	U	0.5	U
Chloromethane	74-87-3		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Cis-1,2-Dichloroethylene	156-59-2	250	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Cis-1,3-Dichloropropene	10061-01-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Cyclohexane	110-82-7		57	J	100	J	**400**	U	260	U	**320**	U	**310**	U	0.5	U	0.5	U
Dibromochloromethane	124-48-1		140	J	210	J	**400**	U	260	U	320	U	310	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	1000	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
m,p-Xylene	179601-23-1		350	U	310	U	400	U	260	U	320	U	310	U	0.05	U	0.05	U
Methyl Acetate	79-20-9		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		**350**	U	**310**	U	**400**	U	**260**	U	**320**	U	**310**	U	0.5	U	0.5	U
Methylcyclohexane	108-87-2		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	50	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Styrene	100-42-5		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Tert-Butyl Methyl Ether	1634-04-4	930	710	U	620	U	800	U	530	U	640	U	620	U	5	U	5	U
Tetrachloroethylene (PCE)	127-18-4	1300	**710**	U	**620**	U	**800**	U	**530**	U	**640**	U	**620**	U	5	U	22	
Toluene	108-88-3	700	**350**	U	**310**	U	**400**	U	**260**	U	**320**	U	**310**	U	0.5	U	0.5	U
Trans-1,2-Dichloroethene	156-60-5	190	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	470	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	20	350	U	310	U	400	U	260	U	320	U	310	U	0.5	U	0.5	U

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	ASB-1		ASB-1		ASB-1		ASB-1		ASB-1		ASB-1		ASB-1		ASB-1		EB-20190301		TB-20190301	
		Sample Date:	2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		3/1/2019		3/1/2019		3/1/2019	
		Sample Depth (ft):	7 - 7.5		9.5 - 10		11.5 - 12		20 - 20.5		21.5 - 22		24 - 24.5		28 - 28.5		34 - 34.5		EB		TB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*4.8*	*U*	*5*	*U*	*4.8*	*U*	**2800**		**5400**		**3800**		55		64		*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	*4.8*	*U*	*5*	*U*	*4.8*	*U*	72		69		68		11		18		*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	*4.8*	*U*	*5*	*U*	*4.8*	*U*	60		150	J+	51		4.5	J	9.6		*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.053	J	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*9.6*	*U*	*10*	*U*	*9.6*	*U*	*10*	*U*	*9.2*	*U*	*10*	*U*	*9.2*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	14		8.6	J	10		11		*9.2*	*U*	7.7	J	6.8	J	11		*5*	*U*	*5*	*U*
Benzene	71-43-2	60	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*UJ*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*4.8*	*U*	*5*	*U*	*4.8*	*U*	12		15	J-	5.2		*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*UJ*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*UJ*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.18	J	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	*4.8*	*U*	*5*	*U*	*4.8*	*U*	6.4		3.3	J+	2.2	J	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.4*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*UJ*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.1	J	*0.5*	*U*
Isopropylbenzene (Cumene)	98-82-8		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.36	J	*0.5*	*U*
Methyl Acetate	79-20-9		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	12		*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*9.6*	*U*	*10*	*U*	*9.6*	*U*	*10*	*U*	*9.2*	*U*	*10*	*U*	*9.2*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*9.6*	*U*	*10*	*U*	*9.6*	*U*	*10*	*U*	*9.2*	*U*	*10*	*U*	*9.2*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.13	J	*0.5*	*U*
Styrene	100-42-5		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	0.37	J	*0.5*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	1.1		*0.5*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	*4.8*	*U*	*5*	*U*	*4.8*	*U*	61		36		9.3		1.5	J	4.2	J	*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	*4.8*	*U*	*5*	*U*	*4.8*	*U*	*5.1*	*U*	*4.6*	*U*	*5.1*	*U*	*4.6*	*U*	*5.5*	*U*	*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	ASB-2		ASB-2 DUP		ASB-2		ASB-2		ASB-2		ASB-2		ASB-2		ASB-2		ASB-2	
		Sample Date:	2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		3/1/2019	
		Sample Depth (ft):	7.5 - 8		7.5 - 8		10 - 10.5		11.5 - 12		15 - 15.5		19 - 19.5		22.5 - 23		25 - 25.5		31.5 - 32	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	52		22	
1,1,2,2-Tetrachloroethane	79-34-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,1,2-Trichloroethane	79-00-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,1-Dichloroethane	75-34-3	270	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	43		7.1		7.5		4.2	J
1,1-Dichloroethene	75-35-4	330	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	20		*4.8*	*U*	5.4		2.3	J
1,2,3-Trichlorobenzene	87-61-6		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2,4-Trichlorobenzene	120-82-1		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2-Dichloroethane	107-06-2	20	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,2-Dichloropropane	78-87-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
2-Hexanone	591-78-6		*9.6*	*U*	*10*	*U*	*9.5*	*U*	*9.9*	*U*	*10*	*U*	*11*	*U*	*9.6*	*U*	*11*	*U*	*11*	*U*
Acetone	67-64-1	50	11		14		11		13		16		37		11		11		8.9	J
Benzene	71-43-2	60	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Bromochloromethane	74-97-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Bromodichloromethane	75-27-4		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Bromoform	75-25-2		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Bromomethane	74-83-9		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Carbon Disulfide	75-15-0		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	5.6		9	
Carbon Tetrachloride	56-23-5	760	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Chlorobenzene	108-90-7	1100	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Chloroethane	75-00-3		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Chloroform	67-66-3	370	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Chloromethane	74-87-3		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	33		120		5.6		2.7	J	*5.3*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Cyclohexane	110-82-7		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Dibromochloromethane	124-48-1		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Dichlorodifluoromethane	75-71-8		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Ethylbenzene	100-41-4	1000	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Isopropylbenzene (Cumene)	98-82-8		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
m,p-Xylene	179601-23-1		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl Acetate	79-20-9		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*9.6*	*U*	*10*	*U*	*9.5*	*U*	*9.9*	*U*	*10*	*U*	14		*9.6*	*U*	*11*	*U*	*11*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*9.6*	*U*	*10*	*U*	*9.5*	*U*	*9.9*	*U*	*10*	*U*	*11*	*U*	*9.6*	*U*	*11*	*U*	*11*	*U*
Methylcyclohexane	108-87-2		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Methylene Chloride	75-09-2	50	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Styrene	100-42-5		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Toluene	108-88-3	700	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Trichloroethylene (TCE)	79-01-6	470	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	24		*5.6*	*U*	*4.8*	*U*	2.6	J	*5.3*	*U*
Trichlorofluoromethane	75-69-4		*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*
Vinyl Chloride	75-01-4	20	*4.8*	*U*	*5.1*	*U*	*4.7*	*U*	*5*	*U*	*5*	*U*	*5.6*	*U*	*4.8*	*U*	*5.3*	*U*	*5.3*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	ASB-3		ASB-3		ASB-3		ASB-3		ASB-3		ASB-3		ASB-3 DUP		ASB-3		ASB-3		ASB-3		EB-20190228	
		Sample Date:	2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019		2/28/2019	
		Sample Depth (ft):	7 - 7.5		9 - 9.5		11.5 - 12		15.5 - 16		19 - 19.5		20 - 20.5		20 - 20.5		24 - 24.5		28 - 28.5		32 - 32.5		EB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	7.4		*10*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	3.7	J	10		12		1.2	J	1.6	J	*10*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*10*	*U*	*11*	*U*	*11*	*U*	*10*	*U*	*11*	*U*	*13*	*U*	*11*	*U*	*9.3*	*U*	*10*	*U*	*21*	*U*	*5*	*U*
Acetone	67-64-1	50	20		27		*11*	*U*	26		38		36		**53**		6.7	J	14		*21*	*U*	*5*	*U*
Benzene	71-43-2	60	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Bromoform	75-25-2		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*UJ*	*5.7*	*UJ*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	0.15	J
Cis-1,2-Dichloroethylene	156-59-2	250	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	2	J	7.7		*6.7*	*U*	2.3	J	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Isopropylbenzene (Cumene)	98-82-8		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	0.26	J
Methyl Acetate	79-20-9		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*10*	*U*	*11*	*U*	*11*	*U*	*10*	*U*	14		12	J	22		*9.3*	*U*	*10*	*U*	*21*	*U*	*5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*10*	*U*	*11*	*U*	*11*	*U*	*10*	*U*	*11*	*U*	*13*	*U*	*11*	*U*	*9.3*	*U*	*10*	*U*	*21*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*UJ*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	0.08	J
Styrene	100-42-5		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	0.28	J
Tert-Butyl Methyl Ether	1634-04-4	930	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Toluene	108-88-3	700	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	1.1	
Trans-1,2-Dichloroethene	156-60-5	190	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	*5.1*	*U*	*5.3*	*U*	*5.3*	*U*	*5.1*	*U*	*5.6*	*U*	*6.7*	*U*	*5.7*	*U*	*4.6*	*U*	*5*	*U*	*10*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-6
Area 4-2B - Soil Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

		Location:	TB-20190228		ASB-4		ASB-4		ASB-4		ASB-4		ASB-4		ASB-4		ASB-4		EB-20190227		TB-20190227	
		Sample Date:	2/28/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019		2/27/2019	
		Sample Depth (ft):	TB		11 - 11.5		15.5 - 16		19.5 - 20		23.5 - 24		27.5 - 28		30.5 - 31		34.5 - 35		EB		TB	
Analyte	Cas Number	NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater (ug/kg)	ug/l		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/l		ug/l	
1,1,1-Trichloroethane (TCA)	71-55-6	680	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2,2-Tetrachloroethane	79-34-5		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,1,2-Trichloroethane	79-00-5		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethane	75-34-3	270	*0.5*	*U*	*5.9*	*U*	2	J	3.3	J	18		*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,1-Dichloroethene	75-35-4	330	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,2,3-Trichlorobenzene	87-61-6		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trichlorobenzene	120-82-1		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
1,2,4-Trimethylbenzene	95-63-6	3600	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dibromo-3-Chloropropane	96-12-8		*0.05*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.05*	*U*	*0.05*	*U*
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichlorobenzene	95-50-1	1100	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloroethane	107-06-2	20	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8400	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
1,3-Dichlorobenzene	541-73-1	2400	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
1,4-Dichlorobenzene	106-46-7	1800	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
2-Hexanone	591-78-6		*5*	*U*	*12*	*U*	*11*	*U*	*12*	*U*	*11*	*U*	*9.7*	*U*	*9.5*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Acetone	67-64-1	50	*5*	*U*	**55**		27		41		32		7.3	J	7	J	*11*	*U*	*5*	*U*	*5*	*U*
Benzene	71-43-2	60	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Bromodichloromethane	75-27-4		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Bromoform	75-25-2		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Bromomethane	74-83-9		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Disulfide	75-15-0		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	1.9	J	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Carbon Tetrachloride	56-23-5	760	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Chlorobenzene	108-90-7	1100	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*UJ*	*4.9*	*UJ*	*4.7*	*UJ*	*5.7*	*UJ*	*0.5*	*U*	*0.5*	*U*
Chloroethane	75-00-3		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Chloroform	67-66-3	370	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Chloromethane	74-87-3		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	0.12	J	*0.5*	*U*
Cis-1,2-Dichloroethylene	156-59-2	250	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	8		*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Cis-1,3-Dichloropropene	10061-01-5		*0.4*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.4*	*U*	*0.4*	*U*
Cyclohexane	110-82-7		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Dibromochloromethane	124-48-1		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Dichlorodifluoromethane	75-71-8		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Ethylbenzene	100-41-4	1000	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Isopropylbenzene (Cumene)	98-82-8		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
m,p-Xylene	179601-23-1		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	0.19	J	*0.5*	*U*
Methyl Acetate	79-20-9		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Methyl Ethyl Ketone (2-Butanone)	78-93-3	120	*5*	*U*	24		10	J	16		9.2	J	*9.7*	*U*	*9.5*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1		*5*	*U*	*12*	*U*	*11*	*U*	*12*	*U*	*11*	*U*	*9.7*	*U*	*9.5*	*U*	*11*	*U*	*5*	*U*	*5*	*U*
Methylcyclohexane	108-87-2		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Methylene Chloride	75-09-2	50	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
o-Xylene (1,2-Dimethylbenzene)	95-47-6		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Styrene	100-42-5		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	0.2	J	*0.5*	*U*
Tert-Butyl Methyl Ether	1634-04-4	930	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Tetrachloroethylene (PCE)	127-18-4	1300	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Toluene	108-88-3	700	0.034	J	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	1.1		*0.5*	*U*
Trans-1,2-Dichloroethene	156-60-5	190	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Trans-1,3-Dichloropropene	10061-02-6		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Trichloroethylene (TCE)	79-01-6	470	*0.5*	*U*	*5.9*	*U*	1.7	J	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Trichlorofluoromethane	75-69-4		*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*
Vinyl Chloride	75-01-4	20	*0.5*	*U*	*5.9*	*U*	*5.4*	*U*	*5.8*	*U*	*5.4*	*U*	*4.9*	*U*	*4.7*	*U*	*5.7*	*U*	*0.5*	*U*	*0.5*	*U*

VALUE results exceed the NYSDEC 375-6.8(b) Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects where the reporting detection limit exceeds the NYSDEC 375-6.8(b) Unrestricted Use Soil Cleanup Objectives for the Protection of Groundwater.
VALUE results are non-detects.

Table 4-7
Geotechnical Testing Results
Vestal Water Supply Well 1-1 Superfund
Site Vestal, New York

Sample Location				GEO-001				GEO-002B			
Sample Material				fine sand and silt		sand and gravel		fine sand and silt		sand and gravel	
Unisturbed Sample Interval* (ft bgs)				10 to 12		30 to 35		10 to 14		20 to 25.5	
Bulk Sample Interval (ft bgs)				5 to 22		22 to 35		5 to 18		18 to 36	
Test Method	Description		Units	Results							
ASTM D4318	Atterberg Limits		NA	Non-Plastic		Non-Plastic		Non-Plastic		Non-Plastic	
ASTM D2216	Moisture Content		%	23		7		19		17	
ASTM G187-12a	Soil Resistivity**		Ohm-cm	8,000		3070		11330		3,200	
ASTM D7263	Soil Density	Wet Density**	g/cm^3	129		144		128		136	
		Dry Density**	g/cm^3	105		135		108		113	
		Moisture Content	%	23		7		19		21	
		Soil Classification	NA	ML with sand		SM with gravel		ML with sand		SW-SM	
ASTM D5084	Triaxial Permeability**		cm/sec	2.3E-06		1.6E-04		9.9E-07		5.6E-05	
ASTM D2166	Unconfined Compressive Strength**		lbs/sq ft	957		183		1,357		487	
ASTM D6913	Sieve Analysis		Inches	mm	% Retained	% Passing	% Retained	% Passing	% Retained	% Passing	% Retained	% Passing
			4"	100.0	0.0	100	0.0	100	0.0	100	0.0	100
			3 1/2"	90.0	0.0	100	0.0	100	0.0	100	0.0	100
			3"	75.0	0.0	100	0.0	100	0.0	100	0.0	100
			2"	50.0	0.0	100	3	97	0.0	100	2	98
			1 1/2"	37.5	0.0	100	3	94	0.0	100	4	94
			1"	25.0	0.0	100	9	85	0.4	100	5	89
			3/4"	19.0	0.0	100	6	78	0.6	99	6	83
			3/8"	9.5	0.2	100	12	66	0.9	98	15	68
			#4	4.75	0.4	99	9	57	2	96	14	54
			#10	2.0	0.2	99	8	50	0.1	96	13	42
			#20	0.850	0.4	99	4	45	0.2	96	7	35
			#40	0.425	0.5	98	8	37	0.3	96	6	28
			#60	0.250	1	97	13	25	1	95	7	21
			#100	0.150	7	91	7	18	9	86	6	15
			#140	0.106	9	81	3	16	10	76	3	12
			#200	0.075	11	71	2	13	11	65	2	11
				Pan	71		13		65		10	
ASTM D7928	Hydrometer Analysis		3/8"	9.5	-	100	-	66	-	98	-	68
			#4	4.75	-	99	-	57	-	96	-	54
			#10	2.00	-	99	-	50	-	96	-	42
			#40	0.425	-	99	-	50	-	96	-	42
			#200	0.075	-	99	-	50	-	96	-	42
		Hydrometer Analysis Results		0.050	-	73	-	13	-	72	-	14
				0.020	-	32	-	8	-	31	-	6
				0.010	-	21	-	5	-	20	-	5
				0.005	-	15	-	4	-	14	-	3
				0.002	-	8	-	3	-	9	-	2
				0.001	-	5	-	2	-	7	-	0.9

* Undisturbed samples were collected with a shelby tube in the fine sand and silt material and with a PVC liner in the sand and gravel material.
** Geotechnical tests conducted on the undistrubed samples include soil resistivity, density, triaxial permeability, and unconfined compressive strength.

Table 4-8
New Well Construction Details
Vestal Water Supply Well 1-1 Superfund
Site Vestal, New York

WELL ID	Date Installed	Surface Completion	Survey Coordinates (NAD83)		NAVD 88			Well Diameter (inches)	Well Material	Screened Interval (ft, amsl)		Screened Interval (ft, bgs)	
			Northing	Easting	Ground Surface (ft amsl)	Outer Casing (ft amsl)	Inner Casing (ft amsl)			Top	Bottom	Top	Bottom
PW-1	2018	Flush Mount	761530.34	965369.26	824.80	824.63	824.32	6	Steel/SS	25	30	799.80	794.80
OW-1	2018	Flush Mount	761499.88	965367.11	824.42	824.39	824.06	2	PVC	25	30	799.42	794.42
OW-2	2018	Flush Mount	761514.63	965369.32	824.53	824.58	824.26	2	PVC	25	30	799.53	794.53
OW-3	2018	Flush Mount	761527.01	965353.70	824.67	824.74	824.41	2	PVC	25	30	799.67	794.67
OW-4	2018	Flush Mount	761523.81	965336.29	824.78	824.74	824.38	2	PVC	25	30	799.78	794.78

Notes:

amsl - above mean sea level
bgs - below ground surface
btoc - below top of casing
DTW - depth to water
ft - feet
PVC - polyvinylchloride
SS - stainless steel
Steel/SS - carbon steel casing and stainless steel screen

Table 4-9
Synoptic Groundwater Level Measurements
January 24, 2018
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

WELL ID	State Plane Coordinates (NAD83)		Casing Elevation (NAVD88)	24-Jan-18				29-Mar-18			
				Depth to Product	Depth to Groundwater	Product Thickness	Groundwater Elevation	Depth to Product	Depth to Groundwater	Product Thickness	Groundwater Elevation
	Northing	Easting	(ft amsl)	(ft)	(ft)	(ft)	(ft amsl)	(ft)	(ft)	(ft)	(ft amsl)
ERT-1D	761746.10	965369.89	824.03	N/A	11.41	-	812.62	-	12.77	-	811.26
ERT-1I	761742.04	965367.78	824.18	N/A	11.67	-	812.51	-	12.58	-	811.60
ERT-1S	761745.34	965366.31	824.16	12.2	12.95	0.75	811.78	10.65	11.47	0.82	813.31
ERT-2D	761503.52	965287.54	824.15	N/A	-	-	-	-	12.72	-	811.43
ERT-2I	761508.10	965286.42	824.21	N/A	11.96	-	812.25	-	13.2	-	811.01
ERT-2S	761505.26	965282.61	824.33	N/A	12.15	-	812.18	-	13.29	-	811.04
ERT-3D	761541.55	965272.46	824.33	N/A	11.62	-	812.71	-	14.08	-	810.25
ERT-3I	761542.13	965276.55	824.38	N/A	12.2	-	812.18	-	13.32	-	811.06
ERT-3S	761538.24	965275.08	824.53	N/A	13.21	-	811.32	-	12.23	-	812.30
ERT-4D	761526.62	965084.09	823.74	N/A	11.96	-	811.78	-	13.66	-	810.08
ERT-4I	761521.53	965084.68	823.56	N/A	11.8	-	811.76	-	13.5	-	810.06
ERT-4S	761524.33	965081.30	823.70	N/A	11.17	-	812.53	-	11.94	-	811.76
ERT-5	761569.23	965436.23	824.37	N/A	11.1	-	813.27	-	12.77	-	811.60
ERT-6	761513.01	965283.21	824.43	N/A	11.4	-	813.03	-	13.56	-	810.87
ERT-7	761527.33	965072.55	824.08	N/A	11.6	-	812.48	-	14.9	-	809.18
ERT-8	761663.71	964987.90	824.84	N/A	11.86	-	812.98	-	-	-	-
MW-A	761793.17	965346.10	823.82	N/A	10.32	-	813.50	-	8.67	-	815.15
MW-B	761770.36	965380.44	823.30	N/A	11.55	-	811.75	-	9.92	-	813.38
MW-C	761752.82	965411.64	823.61	N/A	11.18	-	812.43	-	9.5	-	814.11
MW-D	761775.95	965430.31	822.89	N/A	9.9	-	812.99	-	9.35	-	813.54
MW-E	761798.46	965404.67	824.47	N/A	-	-	-	-	9.92	-	814.55
MW-F	761747.27	965367.32	823.95	11.4	11.49	0.09	812.53	10.56	10.61	0.05	813.38
MW-G	761726.52	965367.77	824.32	N/A	11.87	-	812.45	-	10.16	-	814.16
MW-H	761742.38	965390.07	824.08	N/A	11.19	-	812.89	-	9.88	-	814.20
MW-I	761753.51	965343.00	823.78	N/A	N/A	-	-	-	-	-	-
PW-1	761530.34	965369.26	824.32	N/A	N/A	-	-	-	-	-	-
OW-1	761499.88	965367.11	824.06	N/A	N/A	-	-	-	12.87	-	811.19
OW-2	761514.63	965369.32	824.26	N/A	N/A	-	-	-	13.02	-	811.24
OW-3	761527.01	965353.70	824.41	N/A	N/A	-	-	-	13.16	-	811.25
OW-4	761523.81	965336.29	824.38	N/A	N/A	-	-	-	13.16	-	811.22

Notes:

amsl - above mean sea level
bgs - below ground surface
BTIC - below top of casing
DTW - depth to water
ft - feet
PVC - polyvinylchloride
SS - stainless steel
Groundwater levels corrected for LNAPL using a specific gravity of 0.76

HDR OBG a joint venture

Table 4-10
Groundwater Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	National Primary Drinking Water Standards (ug/l)	NY State Ambient Water Quality Standards and Guidance Values (ug/l)	Location: / Sample Date: ERT-1S 3/30/2018		ERT-1I 3/30/2018		ERT-3S 3/29/2018		ERT-3I 3/29/2018		ERT-4S 3/29/2018		ERT-4I 3/29/2018		ERT-4I DUP 3/29/2018		Trip Blank 3/29/2018		Equipment Blank 3/29/2018		Trip Blank 3/30/2018		Equipment Blank 3/30/2018	
VOCs																									
1,1,1-Trichloroethane (TCA)	71-55-6	200	5	6,600		13		90		190		70,000		5,500		4,700		0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	79-34-5		5	1	U	1	U	1	U	1	U	5		1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1		5	460	J	1	U	1	U	1	U	1	U	3.4		2.9		0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5	5	1	3.9		1	U	1	U	1	U	300	J	1	U	1	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	75-34-3		5	1,300	J	6.6		76		17		57		130		200		0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethene	75-35-4	7	5	590	J	4.5	J	35	J	12	J	1,300		330		400		0.5	UJ	0.5	U	0.5	UJ	0.5	UJ
1,2,3-Trichlorobenzene	87-61-6		5	3.4		0.5	U	0.5	U	0.5	U	17		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	120-82-1	70	5	13		0.5	U	0.5	U	0.5	U	56		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	95-63-6		5	500	J	0.51	J	0.5	UJ	0.5	UJ	13	J	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
1,2-Dibromo-3-Chloropropane	96-12-8	0.2	0.04	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.5	U	1	U	1	U
1,2-Dibromoethane	106-93-4	0.05	0.0006	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	600	3	0.5	U	0.5	U	0.5	U	0.5	U	30		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	107-06-2	5	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5	5	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	108-67-8		5	370	J	0.5	UJ	0.5	UJ	0.5	UJ	1.6	J	0.5	UJ	0.5	UJ	0.5	UJ	0.5	U	0.5	UJ	0.5	UJ
1,3-Dichlorobenzene	541-73-1		3	0.5	U	0.5	U	0.5	U	0.5	U	0.8		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	75	3	0.5	U	0.5	U	0.5	U	0.5	U	6.3		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	591-78-6		50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	5	U	10	U	10	U
Acetone	67-64-1		50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	71-43-2	5	1	10		0.5	U	0.5	U	0.5	U	4.4		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	74-97-5		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	75-27-4		50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	75-25-2		50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromomethane	74-83-9		5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.5	U	1	U	1	U
Carbon Disulfide	75-15-0		60	11		0.5	U	0.5	U	0.5	U	0.5	U	3.9		1.2		0.5	U	0.5	U	0.5	U	0.5	U
Carbon Tetrachloride	56-23-5	5	5	0.5	U	0.5	U	0.5	U	0.5	U	46		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	100	5	0.54		0.5	U	0.5	U	0.5	U	1.2		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	75-00-3		5	4.4		1	U	2.3		1	U	1	U	1	U	1	U	1	U	0.5	U	1	U	1	U
Chloroform	67-66-3		7	46		0.5	U	0.5	U	0.5	U	22		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloromethane	74-87-3		5	1	UJ	1	UJ	1	UJ	1	UJ	1.7	J	1	UJ	1	UJ	1	UJ	0.5	U	1	UJ	1	UJ
cis-1,2-Dichloroethylene	156-59-2	70	5	150,000		1,200		16		3.1		22		13		12		0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	10061-01-5			0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cyclohexane	110-82-7			2	L	0.5	UL	0.5	UL	0.5	UL	0.5	UL	0.5	UL	0.5	UL	0.5	UL	0.5	UJ	0.5	UL	0.5	UL
Dibromochloromethane	124-48-1		50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	75-71-8		5	2.7		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	700	5	220	J	0.5	U	0.5	U	0.5	U	11		0.6		0.57		0.5	U	0.5	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	98-82-8		5	58		0.5	U	0.5	U	0.5	U	0.69		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
M,P-Xylene	179601-23-1	10,000	5	900	J	0.5	U	0.5	U	0.5	U	30		0.5	U	0.5	U	0.5	U	0.6		0.5	U	0.68	
Methyl Acetate	79-20-9			0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl Ethyl Ketone (2-Butanone)	78-93-3		50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Methyl Isobutyl Ketone	108-10-1			5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	108-87-2			13		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methylene Chloride	75-09-2	5	5	0.5	U	0.5	U	0.5	U	0.5	U	520	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
N-Propylbenzene	103-65-1		5	120	J	1	U	1	U	1	U	1.2		1	U	1	U	1	U	0.5	U	1	U	1	U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	10,000	5	690	J	0.5	U	0.5	U	0.5	U	9.8		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Styrene	100-42-5	100	5	0.5	U	0.5	U	0.5	U	0.5	U	0.59		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.55	
Tert-Butyl Methyl Ether	1634-04-4		10	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene (PCE)	127-18-4	5	5	9.3		0.5	U	0.5	U	0.54		80	J	0.76		0.55		0.5	U	0.5	U	0.5	U	0.5	U
Toluene	108-88-3	1,000	5	0.5	U	0.5	U	0.5	U	0.5	U	150	J	0.5	U	0.5	U	0.5	U	1.1		0.5	U	1.2	
Trans-1,2-Dichloroethene	156-60-5	100	5	1100	J	4.9		0.5	U	0.5	U	2.8		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trans-1,3-Dichloropropene	10061-02-6			0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene (TCE)	79-01-6	5	5	12,000		16		4.6		7.4		340,000		61		18		0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	75-69-4		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	75-01-4	2	2	7800	J	130	J	1	U	1	U	2.5		1	U	1	U	1	U	0.5	UJ	1	U	1	U

All results given in ug/l.
VALUE results exceed the National Primary Drinking Water Standards or the New York State Ambient Water Quality Standards and Guidance Values.
VALUE results are non-detect where the reporting detection limit exceeds the National Primary Drinking Water Standards or the New York State Ambient Water Quality Standards and Guidance Values.
VALUE results are non-detects.

NA - not analyzed
U - Not detected above the reporting detection limit
J - Estimated Value
L - the result is biased low

Table 4-10
Groundwater Analytical Results
Vestal Water Supply Well 1-1 Superfund Site
Vestal, New York

Analyte	Cas Number	National Primary Drinking Water Standards (ug/l)	NY State Ambient Water Quality Standards and Guidance Values (ug/l)	Location: ERT-1S Sample Date: 3/30/2018		ERT-1I 3/30/2018		ERT-3S 3/29/2018		ERT-3I 3/29/2018		ERT-4S 3/29/2018		ERT-4I 3/29/2018		ERT-4I DUP 3/29/2018		Trip Blank 3/29/2018		Equipment Blank 3/29/2018		Trip Blank 3/30/2018		Equipment Blank 3/30/2018	
SVOCs																									
1,4-Dioxane	123-91-1			*0.2*	*U*	*0.204*	*U*	NA		*0.211*	*U*	13.9		*0.206*	*U*	*0.204*	*U*			*0.2*	*U*			*0.211*	*U*
PCBs																									
PCB-1016 (Aroclor 1016)	12674-11-2	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1221 (Aroclor 1221)	11104-28-2	5 x 10^{-7} *	5	*0.063*	*UL*	*0.064*	*U*	*0.062*	*U*	*0.062*	*U*	*0.062*	*U*	*0.065*	*U*	*0.065*	*U*			*0.062*	*U*			*0.066*	*U*
PCB-1232 (Aroclor 1232)	11141-16-5	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1242 (Aroclor 1242)	53469-21-9	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1248 (Aroclor 1248)	12672-29-6	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1254 (Aroclor 1254)	11097-69-1	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1260 (Aroclor 1260)	11096-82-5	5 x 10^{-7} *	5	**7.94**	L	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1262 (Aroclor 1262)	37324-23-5	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
PCB-1268 (Aroclor 1268)	11100-14-4	5 x 10^{-7} *	5	*0.031*	*UL*	*0.032*	*U*	*0.031*	*U*	*0.031*	*U*	*0.031*	*U*	*0.033*	*U*	*0.033*	*U*			*0.031*	*U*			*0.033*	*U*
Metals																									
Arsenic	7440-38-2	10	25	**52**		*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	**11**		*8 U*	*U*			*8*	*U*			*8*	*U*
Arsenic, Dissolved	7440-38-2	10	25	**49**		*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	**11**		10									
Barium	7440-39-3	2,000	1,000	210		*100*	*U*	*100*	*U*	*100*	*U*	*100*	*U*	240		240				*100*	*U*			*100*	*U*
Barium, Dissolved	7440-39-3	2,000	1,000	240		*100*	*U*	*100*	*U*	*100*	*U*	*100*	*U*	240		240									
Cadmium	7440-43-9	5	5	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*			*3*	*U*			*3*	*U*
Cadmium, Dissolved	7440-43-9	5	5	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*	*3*	*U*								
Chromium	7440-47-3	100	50	*5*	*U*	*5*	*U*	*5*	*U*	14		**1,000**		*5*	*U*	*5*	*U*			*5*	*U*			*5*	*U*
Chromium, Dissolved	7440-47-3	100	50	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	15		*5*	*U*	*5*	*U*								
Lead	7439-92-1	15	25	*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	**37**		*8*	*U*	*8*	*U*			*8*	*U*			*8*	*U*
Lead, Dissolved	7439-92-1	15	25	*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*	*8*	*U*								
Mercury	7439-97-6	2	0.7	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*			*0.2*	*U*			*0.2*	*U*
Mercury, Dissolved	7439-97-6	2	0.7	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*	*0.2*	*U*								
Selenium	7782-49-2	50	10	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*			**20**	*U*			**20**	*U*
Selenium, Dissolved	7782-49-2	50	10	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*	**20**	*U*								
Silver	7440-22-4		50	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*			*5*	*U*			*5*	*U*
Silver, Dissolved	7440-22-4		50	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*	*5*	*U*								
Parameters																									
Chloride (as Cl)	16887-00-6		250,000	30,000		**280,000**		220,000		**260,000**		120,000		220,000		220,000									
Lime (as Calcium Carbonate)	471-34-1			380,000		370,000		120,000		300,000		120,000		340,000		340,000									
Nitrogen, Ammonia (as N)	7664-41-7		2,000	**3,000**		370		990		410		1,900		62		61									
Nitrogen, Nitrate (as N)	14797-55-8	10,000	10,000	*50*	*U*	*50*	*UL*	4,800		250		910		*50*	*UL*	*50*	*U*								
Nitrogen, Nitrate-Nitrite	NO3NO2N			*50*	*U*	*50*	*U*	4,800		250		910		*50*	*U*	*50*	*U*								
Nitrogen, Nitrite	14797-65-0	1,000	1,000	160		*50*	*U*	350		*50*	*U*	*50*	*U*	*50*	*U*	*50*	*U*								
Phosphate ion	14265-44-2			96		89	L	90		89	L	160		130		120									
Residue, Non-filterable	010-17-3			220,000		38,000		*10,000*	*U*	67,000		420,000		42,000		44,000									
Sulfate (as SO4)	14808-79-8		250,000	5,800		12,000		50,000		33,000		190,000		34,000		34,000									
Sulfide	18496-25-8		50	*10*	*UJ*	*10*	*UJ*	*10*	*UJ*	*10*	*UJ*	*10*	*UJ*	*10*	*UJ*	*10*	*UJ*								
Total Organic Carbon	TOC			110,000		5,600		4,700		3,200		20,000		3,000		2,700									
Physical/Chemical Parameters Measured in the Field																									
Temperature (°C)				NA		9.8		NA		11.27		NA		11.73											
Conductivity (µS/cm)				NA		2		NA		1		NA		1											
ORP (mV)				NA		-128		NA		-23		NA		-106											
Dissolved oxygen (mg/l)				NA		1		NA		6		NA		1											
pH (SU)				NA		7		NA		6		NA		7											
Turbidity (NTU)				NA		11		NA		36		NA		8											

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VALUE results are non-detects.

NA - not analyzed
U - Not detected above the reporting detection limit
J - Estimated Value
L - the result is biased low

Table 4-11
Slug Test Results
Vestal Water Supply Well 1-1 Superfund
Site Vestal, New York

Well ID	Test	Test Run Number	Casing ID (ft)	Borehole Dia. (ft)	Well Depth (ft)	Screen Length (ft)	Static Depth to Water (ft)	Initial Displacement (ft)	Hydraulic Conductivity (ft/day)
MW-G	Rising	1	0.16	0.92	22	15	12.46	1.10	0.3
ERT-1I	Rising	1	0.16	0.5	30	5	12.46	1.41	0.6
ERT-1D	Rising	1	0.16	0.5	50	5	13.56	2.76	0.9
ERT-2I	Rising	2	0.16	0.5	30	5	13.08	2.50	146
ERT-4I	Rising	3	0.16	0.5	30	5	13.38	4.53	225
ERT-4D	Rising	1	0.16	0.5	50	5	13.56	2.72	1
OW-2	Rising	1	0.16	0.5	30	5	11.74	2.45	22
OW-4	Rising	1	0.16	0.5	30	5	11.06	2.56	25

Notes: ft - feet
ft/day - feet per day
Hydraulic conductivity calculated using Hvorslev, 1951

Table 4-12
Aquifer Test Results
Vestal Water Supply Well 1-1 Superfund
Site Vestal, New York

Observation Well	Distance from PW-01 (ft)	Aquifer Thickness (ft)	Transmissivity (ft^2/day)	Storativity	Hydraulic Conductivity (ft/day)	Transmissivity (ft^2/day)	Storativity	Hydraulic Conductivity (ft/day)
			time-drawdown analysis			distance-drawdown analysis		
OW-1	31	20	2,300	$2.5x10^{-6}$	120	2,800	$3.4x10^{-7}$	140
OW-2	16	20	2,300	$5.7x10^{-6}$	120			
OW-3	16	20	2,200	$1.2x10^{-5}$	110			
OW-4	34	20	2,100	$1.1x10^{-5}$	110			
Average	-	20	2,200	$7.8x10^{-6}$	110			

Notes: ft - feet
ft/day - feet per day
ft^2/day - square feet per day
Transmissivity and storativity calculated using Cooper-Jacob, 1946

Table 4-13
Well and Boring Location Survey
Vestal Water Supply Well 1-1 Superfund
Site Vestal, New York

Location ID	Survey Coordinates (NAD83)		Elevation NAVD 88		
	Northing	Easting	Ground Surface (ft amsl)	Outer Casing (ft amsl)	Inner Casing (ft amsl)
Wells					
ERT-1D	761746.10	965369.89	824.34	824.34	824.03
ERT-1I	761742.04	965367.78	824.50	824.59	824.18
ERT-1S	761745.34	965366.31	824.36	824.42	824.16
ERT-2D	761503.52	965287.54	824.53	824.55	824.15
ERT-2I	761508.10	965286.42	824.63	824.60	824.21
ERT-2S	761505.26	965282.61	824.50	824.54	824.33
ERT-3D	761541.55	965272.46	824.91	824.92	824.33
ERT-3I	761542.13	965276.55	824.94	825.01	824.38
ERT-3S	761538.24	965275.08	824.98	825.05	824.53
ERT-4D	761526.62	965084.09	824.16	824.16	823.74
ERT-4I	761521.53	965084.68	824.05	824.09	823.56
ERT-4S	761524.33	965081.30	824.17	824.15	823.70
ERT-5	761569.23	965436.23	824.68	824.77	824.37
ERT-6	761513.01	965283.21	824.64	824.72	824.43
ERT-7	761527.33	965072.55	824.69	824.37	824.08
ERT-8	761663.71	964987.90	825.19	825.59	824.84
MW-A	761793.17	965346.10	824.07	824.22	823.82
MW-B	761770.36	965380.44	823.50	823.66	823.30
MW-C	761752.82	965411.64	823.82	823.87	823.61
MW-D	761775.95	965430.31	823.08	823.19	822.89
MW-E	761798.46	965404.67	824.65	824.83	824.47
MW-F	761747.27	965367.32	824.24	824.41	823.95
MW-G	761726.52	965367.77	824.69	824.85	824.32
MW-H	761742.38	965390.07	824.52	824.46	824.08
MW-I	761753.51	965343.00	824.15	824.34	823.78
PW-1	761530.34	965369.26	824.80	824.63	824.32
OW-1	761499.88	965367.11	824.42	824.39	824.06
OW-2	761514.63	965369.32	824.53	824.58	824.26
OW-3	761527.01	965353.70	824.67	824.74	824.41
OW-4	761523.81	965336.29	824.78	824.74	824.38

Table 4-13
Well and Boring Location Survey
Vestal Water Supply Well Superfund Site
Vestal, New York

Location ID	Survey Coordinates (NAD83)		Elevation NAVD 88		
	Northing	Easting	Ground Surface (ft amsl)	Outer Casing (ft amsl)	Inner Casing (ft amsl)
ISTR Borings					
PSB-201	761778.74	965308.16	822.73	NA	NA
PSB-202	761755.29	965348.70	824.07	NA	NA
PSB-203	761766.60	965447.83	821.42	NA	NA
PSB-204	761740.62	965420.04	823.97	NA	NA
PSB-205	761589.83	965187.32	825.25	NA	NA
PSB-206	761604.18	965218.49	825.24	NA	NA
PSB-207	761573.44	965257.30	825.19	NA	NA
PSB-208	761589.24	965280.17	825.26	NA	NA
PSB-209	761620.17	965299.09	825.22	NA	NA
PSB-210	761549.98	965239.43	825.26	NA	NA
PSB-211	761532.11	965273.81	824.95	NA	NA
PSB-212	761546.94	965297.91	824.87	NA	NA
PSB-213	761479.10	965309.38	824.40	NA	NA
PSB-214	761460.33	965274.65	824.29	NA	NA
PSB-215	761551.70	965149.06	824.87	NA	NA
PSB-216	761534.66	965103.51	823.58	NA	NA
PSB-217	761526.33	965082.03	824.08	NA	NA
PSB-218	761553.87	965058.50	824.93	NA	NA
PSB-219	761500.16	965070.13	824.14	NA	NA
CB-220	761613.50	965178.09	825.23	NA	NA
HPT Borings					
HPT-001	761730.88	965324.20	824.62	NA	NA
HPT-002	761767.58	965417.47	823.16	NA	NA
HPT-003	761545.03	965198.28	824.92	NA	NA
HPT-004	761621.08	965192.63	825.21	NA	NA
HPT-005	761633.55	965264.70	825.26	NA	NA
HPT-006	761583.76	965282.03	825.25	NA	NA
HPT-007	761512.76	965244.31	824.57	NA	NA
HPT-008	761489.27	965329.72	824.48	NA	NA
HPT-009	761529.63	965132.33	823.82	NA	NA
HPT-010	761548.95	965052.66	825.18	NA	NA
Geotechnical Borings					
GEO-001	761721.76	965379.75	824.73	NA	NA
GEO-002B	761544.37	965241.36	824.81	NA	NA

Notes:
amsl - above mean sea level
ft - feet
NA - not applicable