2021 Annual Groundwater Sampling Results

Shallow Groundwater Analytical Results (AOC 11a – Administration Bldg)

Client Sample ID:	NJ Groundwater Criteria (NJAC 7:9C 9/4/18)	AD-1			AD-2			AD-3			AD-4			AD-5			AD-6			AD-8			AD-10		
Lab Sample ID:		L2167075-09			L2165906-04			L2167782-02			L2165906-01			L2165906-07			L2167075-08			L2166615-02			L2165906-05		
Date Sampled:		12/7/2021			12/1/2021			12/9/2021			12/1/2021			12/1/2021			12/7/2021			12/3/2021			12/1/2021		
Matrix:		WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																									
1,1-Dichloroethane	50	ND		0.21	320		21	ND		0.21	ND		5.2	ND		4.2	ND		0.21	ND		0.21	14	J	10
1,2-Dichloropropane	1	ND		0.14	39	J	14	ND		0.14	ND		3.4	ND		2.7	ND		0.14	ND		0.14	ND		6.8
1,1,2-Trichloroethane	3	ND		0.14	15	J	14	ND		0.14	ND		3.6	ND		2.9	ND		0.14	ND		0.14	ND		7.2
Tetrachloroethene	1	ND		0.18	190		18	ND		0.18	ND		4.5	540		3.6	ND		0.18	ND		0.18	ND		9
Chlorobenzene	50	ND		0.18	ND		18	ND		0.18	2200		4.4	15		3.6	ND		0.18	ND		0.18	6500		8.9
1,2-Dichloroethane	2	ND		0.13	ND		13	ND		0.13	5.9	J	3.3	ND		2.6	ND		0.13	ND		0.13	ND		6.6
1,1,1-Trichloroethane	30	ND		0.16	10000		16	ND		0.16	ND		4	ND		3.2	ND		0.16	ND		0.16	ND		7.9
Benzene	1	ND		0.08	ND		8	ND		0.08	29		2	ND		1.6	ND		0.08	0.25	J	0.08	56		4
Ethylbenzene	700	ND		0.17	ND		17	ND		0.17	ND		4.2	ND		3.3	ND		0.17	ND		0.17	7500		8.4
Vinyl chloride	1	ND		0.07	34		7.1	ND		0.07	ND		1.8	13		1.4	ND		0.07	ND		0.07	70		3.6
1,1-Dichloroethene	1	ND		0.17	8100		17	ND		0.17	ND		4.2	3.8	J	3.4	ND		0.17	ND		0.17	48		8.4
Trichloroethene	1	ND		0.18	61		18	ND		0.18	ND		4.4	270		3.5	ND		0.18	ND		0.18	10	J	8.8
1,2-Dichlorobenzene	600	ND		0.18	ND		18	ND		0.18	55	J	4.6	150		3.7	ND		0.18	ND		0.18	2600		9.2
1,3-Dichlorobenzene	600	ND		0.19	ND		19	ND		0.19	98		4.6	ND		3.7	ND		0.19	ND		0.19	1000		9.3
1,4-Dichlorobenzene	75	ND		0.19	ND		19	ND		0.19	290		4.7	66		3.7	ND		0.19	ND		0.19	6300		9.4
Xylenes, Total	1000	ND		0.33	ND		33	ND		0.33	ND		8.3	ND		6.6	ND		0.33	ND		0.33	24000		17
cis-1,2-Dichloroethene	70	ND		0.19	ND		19	ND		0.19	ND		4.7	2100		3.7	ND		0.19	ND		0.19	160		9.4
1,2,4-Trichlorobenzene	9	ND		0.22	ND		22	ND		0.22	ND		5.5	70		4.4	ND		0.22	ND		0.22	200		11
SEMIVOLATILE ORGANICS BY GC/MS-SIM																									
Benzo(a)anthracene	0.1	0.02	J	0.02	0.03	J	0.02	0.04	J	0.02	0.03	J	0.02	0.02	J	0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(a)pyrene	0.1	ND		0.02	ND		0.02	0.04	J	0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	0.2	ND		0.01	ND		0.01	0.1	J	0.01	ND		0.01	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	0.2	ND		0.01	ND		0.01	0.06	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
1,4-Dioxane	0.4	48.8		0.0314	11900		3.26	ND		0.0314	4.1		0.0326	0.596		0.0314	ND		0.0314	ND		0.0326	160		0.0605
TOTAL METALS																									
Aluminum, Total	200	12.4		3.27	9.22	J	3.27	10600		32.7	112		3.27	20.4		3.27	58.3		3.27	1920		3.27	204		3.27
Arsenic, Total	3	0.4364	J	0.165	4.99		0.165	3.049	J	1.65	36.05		0.165	0.4023	J	0.165	1.489		0.165	2.71		0.165	14.82		0.165
Beryllium, Total	1	ND		0.107	ND		0.107	2.306	J	1.07	ND		0.107	ND		0.107	0.1392	J	0.107	0.1642	J	0.107	1.124		0.107
Cadmium, Total	4	0.1783	J	0.0599	ND		0.0599	25.32		0.599	1.026		0.0599	0.1679	J	0.0599	0.515		0.0599	0.1626	J	0.0599	0.0872	J	0.0599
Iron, Total	300	211		19.1	18600		19.1	10000		191	31600		19.1	63.8		19.1	110		19.1	2420		19.1	102000		19.1
Lead, Total	5	ND		0.343	ND		0.343	117.6		3.43	1.229		0.343	ND		0.343	0.4312	J	0.343	2.585		0.343	0.4433	J	0.343
Manganese, Total	50	68.05		0.44	24980		4.4	5146		4.4	2934		0.44	1408		0.44	1278		0.44	287.9		0.44	62760		4.4
Sodium, Total	50000	193000		29.3	489000		293	8020		293	422000		29.3	274000		29.3	109000		29.3	111000		29.3	529000		293
GENERAL CHEMISTRY																									
Nitrogen, Ammonia	3000	33	J	24	87.5		24	335	J	120	3070		24	74	J	24	64.4	J	24	2520		240	4900		24

Intermediate and Deep Groundwater Results (AOC 11a – Administration Bldg)

Client Sample ID:	NJ Groundwater Criteria (NJAC 7:9C 9/4/18)	AD-2DD			AD-3D			AD-5D			AD-9D			AD-9DD			AD-10DD		
Lab Sample ID:		L2165906-03			L2167782-01			L2165906-02			L2165906-06			L2165906-08			L2165570-07		
Date Sampled:		12/1/2021			12/9/2021			12/1/2021			12/1/2021			12/1/2021			11/30/2021		
Matrix:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
1,1-Dichloroethane	50	6.7		0.21	16		0.21	**360**		**10**	5.4		0.42	ND		0.21	ND		0.21
1,2-Dichloropropane	1	0.42	J	0.14	ND		0.14	**28**	**J**	**6.8**	0.36	J	0.27	ND		0.14	ND		0.14
1,1,2-Trichloroethane	3	ND		0.14	ND		0.14	ND		7.2	ND		0.29	ND		0.14	ND		0.14
Tetrachloroethene	1	1		0.18	0.42	J	0.18	**100**		**9**	**240**		**0.36**	0.46	J	0.18	0.25	J	0.18
Chlorobenzene	50	2.2		0.18	ND		0.18	39		8.9	22		0.36	1.9		0.18	0.32	J	0.18
1,2-Dichloroethane	2	**2.1**		**0.13**	ND		0.13	**8.8**	**J**	**6.6**	ND		0.26	ND		0.13	0.52		0.13
1,1,1-Trichloroethane	30	ND		0.16	0.2	J	0.16	**690**		**7.9**	1.1		0.32	ND		0.16	ND		0.16
Benzene	1	0.34	J	0.08	0.08	J	0.08	**4.3**	**J**	**4**	0.25	J	0.16	ND		0.08	ND		0.08
Ethylbenzene	700	ND		0.17	ND		0.17	ND		8.4	3.8		0.33	1.8		0.17	ND		0.17
Vinyl chloride	1	0.72		0.07	0.18	J	0.07	**46**		**3.6**	**3.2**		**0.14**	ND		0.07	0.34		0.07
1,1-Dichloroethene	1	**19**		**0.17**	**14**		**0.17**	**4300**		**8.4**	**16**		**0.34**	0.27	J	0.17	0.47	J	0.17
Trichloroethene	1	**1.6**		**0.18**	**6.3**		**0.18**	**41**		**8.8**	**59**		**0.35**	**1.3**		**0.18**	0.66		0.18
1,2-Dichlorobenzene	600	2.5		0.18	ND		0.18	230		9.2	100		0.37	3.5		0.18	1.9	J	0.18
1,3-Dichlorobenzene	600	ND		0.19	ND		0.19	ND		9.3	4.2	J	0.37	0.42	J	0.19	0.22	J	0.19
1,4-Dichlorobenzene	75	0.46	J	0.19	ND		0.19	**82**	**J**	**9.4**	60		0.37	2.8		0.19	0.78	J	0.19
Xylenes, Total	1000	ND		0.33	ND		0.33	ND		17	13		0.66	6		0.33	ND		0.33
cis-1,2-Dichloroethene	70	3.6		0.19	3.7		0.19	15	J	9.4	**130**		**0.37**	0.98		0.19	0.64		0.19
1,2,4-Trichlorobenzene	9	ND		0.22	ND		0.22	**60**	**J**	**11**	**45**		**0.44**	0.56	J	0.22	1.4	J	0.22
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	0.09	J	0.02	ND		0.02	**0.11**		**0.02**	0.04	J	0.02	**0.25**		**0.02**	0.03	J	0.02
Benzo(a)pyrene	0.1	**0.14**		**0.02**	ND		0.02	0.1	J	0.02	0.04	J	0.02	**0.44**		**0.02**	ND		0.02
Benzo(b)fluoranthene	0.2	**0.35**		**0.01**	ND		0.01	0.18		0.01	0.09	J	0.01	**0.81**		**0.01**	0.02	J	0.01
Indeno(1,2,3-cd)pyrene	0.2	**0.2**		**0.01**	ND		0.01	0.11		0.01	0.07	J	0.01	**0.55**		**0.01**	ND		0.01
1,4-Dioxane	0.4	**44**		**0.0326**	**73.3**		**0.0326**	**5190**		**3.26**	**10.8**		**0.0314**	**0.753**		**0.0314**	0.337		0.0303
TOTAL METALS																			
Aluminum, Total	200	51.2		3.27	11.2		3.27	64.4		3.27	ND		16.4	25.5		3.27	14.9		3.27
Arsenic, Total	3	1.289		0.165	0.406	J	0.165	1.323		0.165	ND		0.825	**4.2**		**0.165**	1.945		0.165
Beryllium, Total	1	ND		0.107	ND		0.107	ND		0.107	ND		0.535	ND		0.107	ND		0.107
Cadmium, Total	4	0.066	J	0.0599	0.0955	J	0.0599	1.008		0.0599	ND		0.2995	ND		0.0599	ND		0.0599
Iron, Total	300	**1620**		**19.1**	41.8	J	19.1	**1060**		**19.1**	**318**		**95.5**	**24300**		**19.1**	**19700**		**19.1**
Lead, Total	5	ND		0.343	ND		0.343	1.012		0.343	ND		1.715	2.626		0.343	ND		0.343
Manganese, Total	50	**276.8**		**0.44**	**70.36**		**0.44**	**5371**		**0.44**	**1133**		**2.2**	**786.2**		**0.44**	**989.8**		**0.44**
Sodium, Total	50000	**121000**		**29.3**	**369000**		**29.3**	**220000**		**29.3**	**175000**		**146**	**60200**		**29.3**	**61700**		**29.3**
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	60.4	J	24	94.6		24	240		24	48.7	J	24	81.3		24	82.2		24