

**TABLE 9A**

Summary of Raw Material Pile Composite Sample and Boring and Test Pit Analytical Data  
 Massachusetts Natural Fertilizer  
 Westminster, Massachusetts  
 Last Updated: 10/20/2022 (J. Libby)



Parameter	Sample Date	Depth/ Material	Estimated Volume (CY)	Regulated PFAS Compounds (ug/kg)						Other Analyzed PFAS Compounds (ug/kg)														
				PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	10:2FTS	8:2 FTS	NETFOA	N-EtFOSAA	NETFOSE	N-MeFOSAA	PFBS	PFDoA	PFHpS	PFHxA	PFOSA	PFPeA	PFTA	PFTDA	PFUnA
			MassDEP RCS-1	0.5	0.3	0.72	0.32	2	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
			MassDEP RCS-2	400	400	400	400	400	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
B1/MW-1	8/30/22	1 ft	65 BPH	0.820	<0.291	9.58	6.61	46.2	23.9	5.53	1.93	1.85	40.6	10.5	0.640	<0.291	9.19	<0.582	0.659	12.4	<0.582	2.30	1.66	4.19
B2/MW-2	8/30/22	1 ft	65 BPH	1.07	<0.232	7.05	5.63	28.1	8.03	<0.93	<0.465	<0.93	6.33	<1.86	<0.465	0.347	3.38	<0.465	0.731	2.11	0.739	0.926	0.951	4.34
	8/30/22	15 - 17 ft	65 BPH	<0.261	<0.261	0.611	0.445	10.5	<0.261	<1.04	<0.522	<1.04	10.5	<2.09	<1.73	<0.261	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522
B3/MW-3	8/30/22	1 ft	65 BPH	<0.262	<0.262	0.328	<0.262	1.07	0.317	<1.05	<0.524	<1.05	<0.524	<2.1	<0.524	<0.262	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524
	8/31/22	14 ft	65 BPH	<0.768	<0.243	0.277	<0.243	1.54	0.371	<0.972	<0.486	<0.972	<0.486	<1.94	<0.486	<0.243	<0.486	<0.486	<1.54	<0.486	<1.54	<0.486	<0.486	<0.486
B4	8/31/22	1 ft	65 BPH	<0.247	<0.247	1.15	0.370	1.68	0.713	<0.987	<0.494	<0.987	0.974	<1.97	<0.494	<0.247	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494
B5/MW-4	8/31/22	1 ft	65 BPH	0.265	<0.254	4.92	1.52	12.8	2.86	3.08	4.36	<1.02	32.7	5.21	<0.508	<0.254	<0.508	<0.508	0.509	0.757	<0.508	<0.508	<0.508	<0.508
	8/31/22	13 - 15 ft	65 BPH	<0.248	<0.248	0.333	<0.248	<0.248	<0.248	<0.994	<0.497	<0.994	<0.497	<1.99	<0.497	<0.248	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497
B6	8/31/22	1 ft	65 BPH	2.95	<0.252	18.7	16.3	114	42.1	7.55	3.57	<1.01	36.2	2.55	0.755	0.268	10.2	0.851	1.65	8.05	1.30	2.28	1.90	7.42
B7	8/31/22	1 ft	65 BPH	<0.254	<0.254	<0.254	<0.254	0.350	0.310	<1.01	<0.507	<1.01	<0.507	<2.03	<0.507	<0.254	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507
Field Blank (ng/L)	8/30/22	--	65 BPH	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<4.78	<1.91	<19.1	<1.91	<47.8	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91
TP-1	8/30/22	0.5 - 1 ft	65 BPH	2.26	<0.245	9.03	1.52	80.1	4.95	3.25	10.5	<0.979	62.3	10.3	<0.489	<0.245	1.39	<0.489	1.47	2.58	1.32	<0.489	<0.489	0.810
TP-2	8/30/22	1 - 2 ft	65 BPH	2.02	<0.272	11.9	2.24	8.24	5.29	1.59	1.09	<1.09	10.4	<2.18	0.640	<0.272	1.90	<0.544	1.19	1.40	0.983	<0.544	<0.544	1.34
TP-3A	8/30/22	12 ft	65 BPH	<0.837	<0.837	1.20	<0.837	<0.837	<0.837	<3.35	<1.67	<1.07	<1.67	<2.14	<1.67	<0.837	<1.67	<1.67	<1.67	<0.534	-	<1.67	<1.67	<1.67
TP-3B	8/30/22	0.25 - 1 ft	65 BPH	1.13	<0.246	9.59	2.80	2.08	<0.246	<0.983	<0.492	<0.983	<0.492	<1.97	<0.492	<0.246	<0.492	<0.492	0.893	<0.492	0.702	<0.492	<0.492	<0.492
TP-4	8/30/22	8 ft	65 BPH	<0.271	<0.271	0.890	0.382	0.457	<0.271	<1.08	<0.541	<1.08	<0.541	<2.16	<1.93	<0.271	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541
TP-5	8/30/22	2 ft	65 BPH	6.90	0.399	66.2	4.86	10.9	4.09	<1.11	<0.556	<1.11	0.807	<2.22	<0.556	0.298	0.688	<0.556	3.74	<0.556	2.12	<0.556	<0.556	0.760
TP-6	8/30/22	1 - 2 ft	65 BPH	<0.259	<0.259	<0.259	<0.259	1.04	0.842	<1.04	<0.518	<1.04	0.598	<2.07	<0.518	<0.259	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518
TP-7	8/30/22	3 ft	65 BPH	<0.252	<0.252	<0.252	<0.252	<0.252	<0.252	<1.01	<0.505	<1.01	<0.505	<2.02	<0.505	<0.252	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505
<b>Raw Material Samples</b>																								
A-1A	7/11/22	Bio-Pellets/Greif	626	0.590 J	0.180 J	3.58	0.890	5.44	1.10	-	-	-	1.62	-	<1.35	0.382 J	0.808	-	2.85	-	-	0.462	<1.35	0.838
A-1B				0.387 J	<0.746	3.70	0.725	5.39	0.958	-	-	-	1.57	-	0.749 J	0.494 J	0.563	-	3.29	-	-	0.396	<1.49	0.555 J
A-1C				0.668 J	<0.749	3.45	1.17	6.26	1.36	-	-	-	1.81	-	0.933 J	0.229 J	0.639	-	2.13	-	-	0.437 J	<1.5	0.773 J
A-1D				1.38	0.201 J	8.84	3.14	20.0	8.80	-	-	-	14.2	-	1.74	0.372 J	3.65	-	4.84	-	-	1.47	1.14	2.79
A-1E				0.413 J	<1.37	2.78	0.754	6.62	1.12	-	-	-	2.59 J	-	<2.73	0.262 J	0.664	-	3.32	-	-	0.516 J	<2.73	0.650
A-1F				0.661 J	<0.779	5.97	1.37	10.1	1.54	-	-	-	2.24	-	2.00	0.581 J	0.707	-	5.69	-	-	0.382 J	0.732	0.866
A-1G				0.635 J	<0.800	4.57	0.829	6.62	1.32	-	-	-	3.30	-	1.73	0.619 J	0.799 J	-	3.84	-	-	0.507 J	0.791	0.776 J
A2-A	7/13/22	Bio-Pellets/Greif	752	1.71	0.353 J	6.83	2.25	12.6	2.57	-	-	-	7.07	-	6.43	1.49	1.38	-	9.71	-	-	0.825 J	<2.19	1.58 J
A2-B				0.733 J	0.435 J	3.73	1.68	9.82	1.26 J	-	-	-	1.81 J	-	<2.76	0.248 J	<2.76	-	2.31 J	-	-	0.543 J	<2.76	1.22 J
A2-C				0.447 J	<1.33	3.20	1.01 J	5.45	0.700 J	-	-	-	1.59 J	-	<2.66	<1.33	0.631 J	-	1.86 J	-	-	0.474 J	<2.66	0.751 J
A2-D				3.26	0.359 J	10.2	1.89	17.2	5.19	-	-	-	6.29	-	5.74	2.89	1.62	-	17.7	-	-	0.725 J	<2.60 J	1.42
A2-E				1.87	0.148 J	8.03	1.78	15.5	4.52	-	-	-	9.27	-	2.44	2.09	2.03	-	20.0	-	-	0.81 J	0.799 J	1.52
A2-F				0.926	<0.598	2.80	0.734	9.64	1.20	-	-	-	3.50	-	1.56	0.675	0.495 J	-	6.07	-	-	0.362 J	<1.2	0.747 J
A2-G				1.74	0.135 J	5.96	1.37	14.2	3.43	-	-	-	7.68	-	4.89	1.17	1.61	-	8.33	-	-	0.826 J	0.779 J	1.28
A2-H				0.940	<0.854	5.13	2.74	16.6	7.50	-	-	-	9.88	-	1.23 J	0.477 J	2.36	-	2.87	-	-	0.902 J	0.935 J	1.99
A2-I				0.467 J	0.282 J	3.63	1.22	6.71	1.05 J	-	-	-	2.20	-	<2.13	0.224 J	0.710	-	2.19	-	-	0.476 J	<2.13	0.806 J
A-3A	7/11/22	Bio-Pellets/Greif	524	0.782	0.171 J	3.90	0.952	8.40	2.12	-	-	-	5.00	-	1.88	0.608 J	0.923 J	-	5.21	-	-	0.953 J	1.03 J	0.907 J
A-3B				0.693 J	<1.39	4.73	0.954 J	8.80	1.86	-	-	-	5.54	-	1.91 J	0.317 J	0.595 J	-	3.36	-	-	0.595 J	<2.78	1.16
A-3C				0.399 J	0.217 J	4.49	1.11	7.00	0.891	-	-	-	2.97	-	1.08 J	0.236 J	0.663 J	-	2.34	-	-	0.702	0.746 J	0.810 J
A-3D				0.330 J	<0.632	2.62	0.483 J	3.00	0.676	-	-	-	1.28	-	<1.26	0.160 J	0.324	-	1.55	-	-	0.406	0.542	0.533 J
A-3E				0.514 J	0.209 J	4.71	1.37	9.78	1.20	-	-	-	3.93	-	1.11 J	0.301 J	0.756	-	2.24	-	-	0.417	0.615	1.40 J
A-3F				0.629 J	<0.747	3.88	0.929	7.19	1.53	-	-	-	4.21	-	1.33 J	0.166 J	0.795 J	-	3.58	-	-	0.608	0.783	0.883 J
B-1A	7/7/22	Lettuce Leaf/Rockwool	987	0.090 J	<0.400	0.933	0.482	3.13	1.73	-	-	-	1.67	-	<0.799	<0.4	0.489 J	-	0.141 J	-	-	0.164 J	<0.799	0.318 J
B-1B				0.101 J	<0.444	0.744	0.377 J	1.04	0.520	-	-	-	0.222 J	-	<0.889	<0.444	<0.889	-	0.236 J	-	-	<0.889	<0.889	<0.889
B-1C				<0.450	<0.450	0.140 J	<0.450	<0.45	0.166 J	-	-	-	0.155 J	-	<0.9	<0.45	<0.9	-	<0.9	-	-	<0.9	<0.9	<0.9
B-1D				<0.450	<0.450	0.572	<0.450	0.273 J	<0.450	-	-	-	<0.899	-	<0.899	<0.45	<0.899	-	0.097 J	-	-	<0.899	<0.899	<0.899
B-1E				0.215 J	<0.303	1.48	0.373	2.23	0.898	-	-	-	0.41											

**TABLE 9A**

Summary of Raw Material Pile Composite Sample and Boring and Test Pit Analytical Data  
 Massachusetts Natural Fertilizer  
 Westminster, Massachusetts  
 Last Updated: 10/20/2022 (J. Libby)



Parameter	Sample Date	Depth/ Material	Estimated Volume (CY)	Regulated PFAS Compounds (ug/kg)						Other Analyzed PFAS Compounds (ug/kg)															
				PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	10:2FTS	8:2 FTS	NETFOA	N-EtFOSA	NETFOSE	N-MeFOSA	PFBS	PFDoA	PFHpS	PFHxA	PFOSA	PFPeA	PFTA	PFTTrDA	PFUnA	
			MassDEP RCS-1	0.5	0.3	0.72	0.32	2	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
			MassDEP RCS-2	400	400	400	400	400	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
B1/MW-1	8/30/22	1 ft	65 BPH	0.820	<0.291	9.58	6.61	46.2	23.9	5.53	1.93	1.85	40.6	10.5	0.640	<0.291	9.19	<0.582	0.659	12.4	<0.582	2.30	1.66	4.19	
B2/MW-2	8/30/22	1 ft	65 BPH	1.07	<0.232	7.05	5.63	28.1	8.03	<0.93	<0.465	<0.93	6.33	<1.86	<0.465	0.347	3.38	<0.465	0.731	2.11	0.739	0.926	0.951	4.34	
	8/30/22	15 - 17 ft	65 BPH	<0.261	<0.261	0.611	0.445	10.5	<0.261	<1.04	<0.522	<1.04	5.29	<2.09	<1.73	<0.261	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	
B3/MW-3	8/30/22	1 ft	65 BPH	<0.262	<0.262	0.328	<0.262	1.07	0.317	<1.05	<0.524	<1.05	<0.524	<2.1	<0.524	<0.262	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	
	8/31/22	14 ft	65 BPH	<0.768	<0.243	0.277	<0.243	1.54	0.371	<0.972	<0.486	<0.972	<0.486	<1.94	<0.486	<0.243	<0.486	<0.486	<1.54	<0.486	<1.54	<0.486	<0.486	<0.486	
B4	8/31/22	1 ft	65 BPH	<0.247	<0.247	1.15	0.370	1.68	0.713	<0.987	<0.494	<0.987	0.974	<1.97	<0.494	<0.247	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	
B5/MW-4	8/31/22	1 ft	65 BPH	0.265	<0.254	4.92	1.52	12.8	2.86	3.08	4.36	<1.02	32.7	5.21	<0.508	<0.254	<0.508	<0.508	0.509	0.757	<0.508	<0.508	<0.508	<0.508	
	8/31/22	13 - 15 ft	65 BPH	<0.248	<0.248	0.333	<0.248	<0.248	<0.248	<0.994	<0.497	<0.994	<0.497	<1.99	<0.497	<0.248	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	
B6	8/31/22	1 ft	65 BPH	2.95	<0.252	18.7	16.3	114	42.1	7.55	3.57	<1.01	36.2	2.55	0.755	0.268	10.2	0.851	1.65	8.05	1.30	2.28	1.90	7.42	
B7	8/31/22	1 ft	65 BPH	<0.254	<0.254	<0.254	<0.254	0.350	0.310	<1.01	<0.507	<1.01	<0.507	<2.03	<0.507	<0.254	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	
Field Blank (ng/L)	8/30/22	--	65 BPH	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<4.78	<1.91	<19.1	<1.91	<47.8	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	
TP-1	8/30/22	0.5 - 1 ft	65 BPH	2.26	<0.245	9.03	1.52	80.1	4.95	3.25	10.5	<0.979	62.3	10.3	<0.489	<0.245	1.39	<0.489	1.47	2.58	1.32	<0.489	<0.489	0.810	
TP-2	8/30/22	1 - 2 ft	65 BPH	2.02	<0.272	11.9	2.24	8.24	5.29	1.59	1.09	<1.09	10.4	<2.18	0.640	<0.272	1.90	<0.544	1.19	1.40	0.983	<0.544	<0.544	1.34	
TP-3A	8/30/22	12 ft	65 BPH	<0.837	<0.837	1.20	<0.837	<0.837	<0.837	<3.35	<1.67	<1.07	<1.67	<2.14	<1.67	<0.837	<1.67	<1.67	<1.67	<0.534	-	<1.67	<1.67	<1.67	
TP-3B	8/30/22	0.25 - 1 ft	65 BPH	1.13	<0.246	9.59	2.80	2.08	<0.246	<0.983	<0.492	<0.983	<0.492	<1.97	<0.492	<0.246	<0.492	<0.492	0.893	<0.492	0.702	<0.492	<0.492	<0.492	
TP-4	8/30/22	8 ft	65 BPH	<0.271	<0.271	0.890	0.382	0.457	<0.271	<1.08	<0.541	<1.08	<0.541	<2.16	<1.93	<0.271	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	
TP-5	8/30/22	2 ft	65 BPH	6.90	0.399	66.2	4.86	10.9	4.09	<1.11	<0.556	<1.11	0.807	<2.22	<0.556	0.298	0.688	<0.556	3.74	<0.556	2.12	<0.556	<0.556	0.760	
TP-6	8/30/22	1 - 2 ft	65 BPH	<0.259	<0.259	<0.259	<0.259	1.04	0.842	<1.04	<0.518	<1.04	0.598	<2.07	<0.518	<0.259	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	
TP-7	8/30/22	3 ft	65 BPH	<0.252	<0.252	<0.252	<0.252	<0.252	<0.252	<1.01	<0.505	<1.01	<0.505	<2.02	<0.505	<0.252	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	
<b>Raw Material Samples</b>																									
C-1A	7/11/22	Seaman Paper	605	0.218 J	<0.420	0.464	0.239	2.72	0.546	-	-	-	1.54	-	<0.841	<0.42	0.181 J	-	0.620 J	-	-	0.118 J	<0.841	0.206 J	
C-1B				0.114 J	<0.523	0.257 J	0.182 J	1.88	0.274 J	-	-	-	0.993 J	-	<1.04	<0.523	<1.04	-	0.125 J	-	-	-	<1.04	<1.04	0.191 J
C-1C				0.107 J	<0.405	0.230 J	0.142 J	1.22	0.185 J	-	-	-	0.459 J	-	<0.810	<0.405	<0.810	-	0.305 J	-	-	-	<0.810	<0.810	<0.810
C-1D				0.864	<0.307	1.41	0.185	1.41	0.299 J	-	-	-	0.883	-	<0.613	<0.307	0.101	-	10.0	-	-	-	<0.613	<0.613	0.148 J
C-1E				1.68	<0.293	1.09	0.236 J	1.72	0.328	-	-	-	2.22	-	<0.586	<0.293	0.133 J	-	22.5	-	-	-	0.067	<0.586	0.179 J
C-1F				1.70	<0.306	0.992	0.178 J	1.50	0.331	-	-	-	1.45	-	0.454 J	0.068 J	0.122	-	13.4	-	-	-	<0.611	<0.611	0.158 J
C-2	7/11/22	Seaman Paper	<100	0.784	<0.775	1.31	0.392 J	1.91	0.967	-	-	-	1.98	-	<1.55	<0.775	0.342 J	-	6.78	-	-	0.183 J	<1.55	0.36 J	
D-1A	7/8/22	Ball Corp. DE	762	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	-	-	-	0.522	-	<3.06	<1.53	<3.06	-	<3.06	-	-	<3.06	<3.06	<3.06	
D-1B				0.220 J	<0.361	0.385	0.160 J	0.694	0.310 J	-	-	-	0.745	-	<0.722	<0.361	0.186	-	1.27	-	-	-	0.138 J	<0.722	0.227 J
D-1C				<1.68	<1.68	0.401 J	<1.68	<1.68	<1.68	-	-	-	0.812 J	-	<3.37	<1.68	<3.37	-	1.32 J	-	-	-	<3.37	<3.37	<3.37
D-1D				0.265 J	<1.40	1.36 J	0.519 J	2.47	0.938 J	-	-	-	2.60	-	<2.79	<1.4	0.584 J	-	0.960 J	-	-	-	0.575 J	<2.79	0.522 J
D-1E				<2.46	<2.46	0.447 J	<2.46	<2.46	<2.46	-	-	-	<4.91	-	<4.91	<2.46	<4.91	-	<4.91	-	-	-	<4.91	<4.91	<4.91
D-1F				<2.00	<2.00	2.34	<2.00	<2.00	<2.00	-	-	-	<4.00	-	<4.00	<2.00	<4.00	-	0.460 J	-	-	-	<4.00	<4.00	0.432 J
D-1G				<2.29	<2.29	<2.29	<2.29	<2.29	<2.29	-	-	-	<4.58	-	<4.58	<2.29	<4.58	-	<4.58	-	-	-	<4.58	<4.58	<4.58
D-1H				<2.44	<2.44	<2.44	<2.44	<2.44	<2.44	-	-	-	<4.87	-	<4.87	<2.44	<4.87	-	0.828	-	-	-	<4.87	<4.87	<4.87
G-A	7/7/22	Tea Leaves/ Potato Chips	700	3.46	<0.898	23.7	7.50	38.1	16.7	-	-	-	34.0	-	1.86	2.18	5.37	-	4.77	-	-	1.88	1.55 J	4.25	
G-B				<0.794	<0.794	0.433 J	<0.794	2.29	0.382 J	-	-	-	1.11 J	-	<1.59	<0.794	<1.59	-	<1.59	-	-	-	<1.59	<1.59	<1.59
G-C	7/7/22	Tea Leaves/Pad		2.17	<0.748	10.9	2.65	14.6	6.60	-	-	-	12.7	-	<1.5	1.55	1.94	-	3.03	-	-	0.719 J	<1.5	1.44 J	
G-D	7/7/22	Tea Leaves, Old	700	0.328 J	<0.653	2.25	0.639 J	4.86	1.66	-	-	-	2.60	-	<1.31	0.145 J	0.405 J	-	0.499 J	-	-	<1.31	<1.31	0.295 J	
G-E				<0.768	<0.768	0.518 J	<0.768	1.43	0.41 J	-	-	-	<1.54	-	<1.54	<0.768	0.316 J	-	0.174 J	-	-	-	0.189 J	<1.54	<1.54
G-F	7/7/22	Tea Leaves, New		0.534 J	<0.822	6.85	2.51	14.8	7.18	-	-	-	26.4	-	1.30 J	<0.822	2.12	-	0.539 J	-	-	0.702 J	<1.64	1.49 J	
G-G	7/7/22	Potato Chips		<0.388	<0.388	<0.388	<0.388	<0.388	<0.388	-	-	-	<0.776	-	<0.776	<0.388	<0.776	-	<0.776	-	-	<0.776	<0.776	<0.776	
I-1A	7/7/22	Potting Soil/Yard Waste/Cannabis Rootballs	814	1.02 J	<3.10	5.24	0.987	7.42	4.21	-	-	-	5.54 J	-	<6.21	3.60	<6.21	-	4.59 J	-	-	1.22	<6.21	0.689	
I-1B				<2.89	<2.89	2.07 J	<2.89	2.66 J	0.912	-	-	-	<5.78	-	<5.78	3.03	<5.78	-	1.30 J	-	-	-	<5.78	<5.78	<5.78
I-1C				0.757 J	<2.41	3.24	<2.41	3.78	0.708 J	-	-														

**TABLE 9A**

Summary of Raw Material Pile Composite Sample and Boring and Test Pit Analytical Data  
 Massachusetts Natural Fertilizer  
 Westminster, Massachusetts  
 Last Updated: 10/20/2022 (J. Libby)



Parameter	Sample Date	Depth/ Material	Estimated Volume (CY)	Regulated PFAS Compounds (ug/kg)						Other Analyzed PFAS Compounds (ug/kg)														
				PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	10:2FTS	8:2 FTS	NETFOA	N-EtFOSAA	NETFOSE	N-MeFOSAA	PFBS	PFDoA	PFHpS	PFHxA	PFOSA	PFPeA	PFTA	PFTTrDA	PFUnA
				<b>0.5</b>	<b>0.3</b>	<b>0.72</b>	<b>0.32</b>	<b>2</b>	<b>0.3</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
				<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
B1/MW-1	8/30/22	1 ft	65 BPH	<b>0.820</b>	<0.291	<b>9.58</b>	<b>6.61</b>	<b>46.2</b>	<b>23.9</b>	5.53	1.93	1.85	40.6	10.5	0.640	<0.291	9.19	<0.582	0.659	12.4	<0.582	2.30	1.66	4.19
B2/MW-2	8/30/22	1 ft	65 BPH	<b>1.07</b>	<0.232	<b>7.05</b>	<b>5.63</b>	<b>28.1</b>	<b>8.03</b>	<0.93	<0.465	<0.93	6.33	<1.86	<0.465	0.347	3.38	<0.465	0.731	2.11	0.739	0.926	0.951	4.34
	8/30/22	15 - 17 ft	65 BPH	<0.261	<0.261	0.611	<b>0.445</b>	<b>10.5</b>	<0.261	<1.04	<0.522	<1.04	<b>10.5</b>	5.29	<2.09	<1.73	<0.261	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522	<0.522
B3/MW-3	8/30/22	1 ft	65 BPH	<0.262	<0.262	0.328	<0.262	1.07	<b>0.317</b>	<1.05	<0.524	<1.05	<0.524	<2.1	<0.524	<0.262	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524
	8/31/22	14 ft	65 BPH	<0.768	<0.243	0.277	<0.243	1.54	<b>0.371</b>	<0.972	<0.486	<0.972	<0.486	<1.94	<0.486	<0.243	<0.486	<0.486	<1.54	<0.486	<1.54	<0.486	<0.486	<0.486
B4	8/31/22	1 ft	65 BPH	<0.247	<0.247	<b>1.15</b>	<b>0.370</b>	1.68	<b>0.713</b>	<0.987	<0.494	<0.987	<b>0.974</b>	<1.97	<0.494	<0.247	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494	<0.494
B5/MW-4	8/31/22	1 ft	65 BPH	0.265	<0.254	<b>4.92</b>	<b>1.52</b>	<b>12.8</b>	<b>2.86</b>	3.08	4.36	<1.02	32.7	5.21	<0.508	<0.254	<0.508	<0.508	<b>0.509</b>	<b>0.757</b>	<0.508	<0.508	<0.508	<0.508
	8/31/22	13 - 15 ft	65 BPH	<0.248	<0.248	<b>0.333</b>	<0.248	<0.248	<0.248	<0.994	<0.497	<0.994	<0.497	<1.99	<0.497	<0.248	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497	<0.497
B6	8/31/22	1 ft	65 BPH	<b>2.95</b>	<0.252	<b>18.7</b>	<b>16.3</b>	<b>114</b>	<b>42.1</b>	7.55	3.57	<1.01	36.2	2.55	0.755	0.268	10.2	0.851	1.65	8.05	1.30	2.28	1.90	7.42
B7	8/31/22	1 ft	65 BPH	<0.254	<0.254	<0.254	<0.254	0.350	<b>0.310</b>	<1.01	<0.507	<1.01	<0.507	<2.03	<0.507	<0.254	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507	<0.507
Field Blank (ng/L)	8/30/22	--	65 BPH	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<4.78	<1.91	<19.1	<1.91	<47.8	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91	<1.91
TP-1	8/30/22	0.5 - 1 ft	65 BPH	<b>2.26</b>	<0.245	<b>9.03</b>	<b>1.52</b>	<b>80.1</b>	<b>4.95</b>	3.25	10.5	<0.979	62.3	10.3	<0.489	<0.245	1.39	<0.489	1.47	2.58	1.32	<0.489	<0.489	0.810
TP-2	8/30/22	1 - 2 ft	65 BPH	<b>2.02</b>	<0.272	<b>11.9</b>	<b>2.24</b>	<b>8.24</b>	<b>5.29</b>	1.59	1.09	<1.09	10.4	<2.18	0.640	<0.272	1.90	<0.544	1.19	1.40	0.983	<0.544	<0.544	1.34
TP-3A	8/30/22	12 ft	65 BPH	<0.837	<0.837	<b>1.20</b>	<0.837	<0.837	<0.837	<3.35	<1.67	<1.07	<1.67	<2.14	<1.67	<0.837	<1.67	<1.67	<1.67	<0.534	-	<1.67	<1.67	<1.67
TP-3B	8/30/22	0.25 - 1 ft	65 BPH	<b>1.13</b>	<0.246	<b>9.59</b>	<b>2.80</b>	<b>2.08</b>	<0.246	<0.983	<0.492	<0.983	<0.492	<1.97	<0.492	<0.246	<0.492	<0.492	<b>0.893</b>	<0.492	<b>0.702</b>	<0.492	<0.492	<0.492
TP-4	8/30/22	8 ft	65 BPH	<0.271	<0.271	<b>0.890</b>	<b>0.382</b>	0.457	<0.271	<1.08	<0.541	<1.08	<0.541	<2.16	<1.93	<0.271	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541	<0.541
TP-5	8/30/22	2 ft	65 BPH	<b>6.90</b>	<b>0.399</b>	<b>66.2</b>	<b>4.86</b>	<b>10.9</b>	<b>4.09</b>	<1.11	<0.556	<1.11	0.807	<2.22	<0.556	0.298	0.688	<0.556	3.74	<0.556	2.12	<0.556	<0.556	0.760
TP-6	8/30/22	1 - 2 ft	65 BPH	<0.259	<0.259	<0.259	<0.259	1.04	<b>0.842</b>	<1.04	<0.518	<1.04	0.598	<2.07	<0.518	<0.259	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518	<0.518
TP-7	8/30/22	3 ft	65 BPH	<0.252	<0.252	<0.252	<0.252	<0.252	<0.252	<1.01	<0.505	<1.01	<0.505	<2.02	<0.505	<0.252	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505	<0.505

**Raw Material Samples**

I-2	7/7/22	Residential Yard Waste	<100	<1.53	<1.53	0.582 J	<1.53	<1.53	<1.53	-	-	-	<3.06	-	<3.06	<b>1.11 J</b>	<3.06	-	<b>0.325 J</b>	-	-	<3.06	<3.06	<3.06
I-4A	7/8/22		278	<0.796	<0.796	0.226 J	<0.796	0.973	0.295 J	-	-	-	<1.59	-	<1.59	<0.796	<1.59	-	0.196 J	-	-	<1.59	<1.59	0.174 J
I-4B			<0.638	<0.638	0.125 J	<0.638	0.422 J	<0.638	-	-	-	<1.28	-	<1.28	<0.638	<1.28	-	0.154	-	-	<1.28	<1.28	<1.28	
I-4C			<0.721	<0.721	0.144 J	<0.721	0.592 J	<0.721	-	-	-	<1.44	-	<1.44	<0.721	<1.44	-	0.186 J	-	-	<1.44	<1.44	<1.44	
I-5	7/8/22		<100	<0.844	<0.844	0.181 J	<0.844	0.444 J	<0.844	-	-	-	<1.69	-	<1.69	<0.844	<1.69	-	0.208 J	-	-	<1.69	<1.69	<1.69
J-A	7/7/22	Golf Course	278	<b>1.02</b>	<0.274	<b>2.41</b>	<b>0.681</b>	<b>5.02</b>	<b>1.41</b>	-	-	-	0.683	-	<0.547	<0.274	<b>0.393 J</b>	-	0.613	-	-	<0.547	<0.547	0.342 J
J-B			0.078 J	<0.255	0.261	0.112	0.763	0.172	-	-	-	<0.511	-	<0.511	<0.255	<0.511	-	<0.511	-	-	<0.511	<0.511	0.090	
J-C			<b>0.748</b>	<0.275	<b>2.42</b>	<b>1.12</b>	<b>8.41</b>	<b>2.05</b>	-	-	-	1.10	-	0.258 J	<0.275	0.685	-	0.521 J	-	-	0.131 J	<0.55	0.544 J	
M-1	7/8/22	Sawdust	15	<0.472	<0.472	0.097 J	<0.472	<0.472	<0.472	-	-	-	<0.943	-	<0.943	<0.472	<0.943	-	<0.943	-	-	<0.943	<0.943	<0.943
N-1A	7/11/22	Red Mud	340	<0.475	<0.475	0.476	0.180	1.52	<b>0.725</b>	-	-	-	1.09	-	<0.95	<0.475	<0.95	-	<0.95	-	-	0.128	<0.95	<0.95
N-1B			0.149 J	<0.440	<b>1.54</b>	0.418 J	<b>4.09</b>	<b>1.18</b>	-	-	-	2.37	-	<0.881	<0.44	0.332	-	<0.881	-	-	<0.881	<0.881	0.451	
N-1C			<0.436	<0.436	0.672	0.167 J	1.86	<b>0.782</b>	-	-	-	1.80	-	<0.872	<0.436	0.437	-	0.161	-	-	<0.872	<0.872	<0.872	
N-1D			0.104 J	<0.438	<b>1.01</b>	<b>0.530</b>	<b>3.59</b>	<b>1.76</b>	-	-	-	4.44	-	<0.876	<0.438	0.818	-	<0.876	-	-	0.233 J	<0.876	<0.876	
P-1	7/12/22	Manure	54	<b>0.882</b>	<0.360	<b>2.99</b>	<b>0.969</b>	<b>7.59</b>	<b>2.09</b>	-	-	-	2.96	-	<0.720	0.322 J	0.847	-	1.16	-	-	0.320 J	<0.720	0.770
R-1	7/11/22	Carbon Pellets	<100	<b>3.65</b>	0.673 J	<b>50.4</b>	<b>3.17</b>	<b>6.58</b>	<b>17.0</b>	-	-	-	1.02 J	-	1.40 J	7.55	5.18	-	65.4	-	-	1.25 J	<1.72	1.40 J
T-1	7/8/22	Greif Paper Only	80	0.571 J	<0.575	<b>3.96</b>	<b>0.760</b>	<b>5.25</b>	<b>1.55</b>	-	-	-	2.88	-	1.01 J	0.687	0.685 J	-	2.32	-	-	0.496 J	<1.15	0.643 J
T-2A	7/8/22		142	0.228 J	<0.747	<b>1.57</b>	0.300 J	1.26	0.282 J	-	-	-	0.324 J	-	<1.49	<0.747	0.279	-	0.267	-	-	<1.49	<1.49	0.342 J
T-2B			0.246 J	<0.784	<b>1.72</b>	0.362 J	1.44	0.376 J	-	-	-	<1.57	-	<1.57	<0.784	0.302	-	0.292	-	-	0.207 J	<1.57	0.408 J	
T-3			7/8/22	95	<b>1.10</b>	<0.742	<b>4.94</b>	<b>1.36</b>	<b>7.08</b>	<b>2.39</b>	-	-	-	6.70	-	1.34 J	0.322 J	1.16 J	-	5.04 B	-	-	0.732 J	0.728 J

MassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates

NS - No Standard

<xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

Boxed and Bold values indicate exceedance of RCS-1 value

Grey shaded results indicate RL exceeds RCS-1 value

Results presented in nanograms per kilogram (ug/kg, parts per billion (ppb))

PFAS - Per- and Polyfluoroalkyl Substances

J - Value reported above the MDL but below the RL

Only PFAS with results above RL are shown above