May 5, 2022

Mr. Jahan Reza
Project Manager
Division of Environmental Remediation
50 Circle Road, Stony Brook, NY 11790

Re: Shut Down Sampling Results
Site # 130193
Elks Plaza Freeport, NY

Dear Mr. Reza:
Tyll Engineering and Consulting, PC (TEC) has prepared this report to summarize the soil vapor sampling at the above referenced property in accordance with the Site Management Plan's (SMP) Section 2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems and the shutdown request workplan letter dated January 26, 2021 and approved by the NYSDEC on February 12, 2021. An additional workplan was reported to not be required. The SSDS system was shut down on May 21, 2021.

Background
As per the June 2014 Final Engineering Report (FER), engineering controls have been employed at the site since June 2012 to maintain acceptable indoor air quality. The initial control was a soil vapor extraction system (SVES) installed in June 2012 and operated as such until January 2013. In January 2013, the SVES was converted to a sub-slab depressurization system (SSDS).

As per the May 2014 SMP, "…remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10". In addition, the SMP states "Operation of the SSD system will be terminated when the following are demonstrated in accordance with Indoor Air Matrix 2 of the NYSDOH's 2006 Guidance document:

- Indoor air concentrations of PCE in the laundromat are less than 3 ug/m^3; and,
- Sub-slab vapor concentration of PCE below the laundromat is less than 100 ug/m^3.

This is to be demonstrated during the winter heating season, to represent the worst-case scenario, and after the SSDS has been turned off for a period of 30 days or more. The NYSDEC and NYSDOH have asked for the system to be shut off for a minimum of 60 days.

Methodology
On May 21, 2021, the SSDS was shut down and the vent on the roof was covered. After the 306-day temporary SSDS shut down, sampling was conducted on March 23, 2022. Sub-slab vapor samples and co-located indoor air samples were sampled at the 2010 Supplemental Soil Vapor Investigation baseline locations along with an outdoor ambient air sample (Figure 1). The sample in Unit 171 was not part of this scope of work due to prior sampling results. Indoor air samples 181A, and 179A were collected in the Laundromat. Sub-slab soil vapor samples were also collected in Units 179A and 181A from the existing monitoring points. One ambient outdoor sample was collected outside of Unit 181A. As part of the vapor intrusion evaluation, a tracer gas, helium, was used in accordance with NYSDOH protocols.

All samples were collected using 2.7 Liter SUMMA canisters with regulators calibrated to fill over a period of eight hours. The Summa canisters were connected to the implants and sampling began early the morning of March 23rd. One indoor air sampling canister was co-located with each sub slab implant. The outside (ambient air) canister was set on the ground outside of the laundromat. This location borders the Woodward School where there's a parking lot and school buses may be lined up and idling in place.

Sampling logs are included as Attachment A and representative photos are included in Attachment B. Laundry detergents appeared to be brought in with each customer, but the laundromat has a large stock of laundry products for use and for sale. The doors to the inside enclosed mall and outside parking lot were constantly in motion with a number of customers entering and exiting. The NYSDOH IAQ and Building Inventory is included in Attachment E.

The samples were picked up by lab courier and brought to Alpha Analytical Laboratories, Mansfield, MA (NYSDOH ELAP #11627). EPA Method TO-15 SIM was used to analyze the air samples.

The SSDS was turned back on April 4, 2022.

Results

The laboratory report is provided in Attachment C and detections in ug/m^3 are summarized on Table 1 and a comparison of data from the 2020 and 2021 sampling event on Table 2. There were low detections of PCE in the outdoor air sample (4.37 ug/m^3), the Unit 179A indoor air sample (1.46 ug/m^3), and the Unit 181A indoor air sample (1.02 ug/m^3). PCE was detected in the sub-slab vapor sample in Laundromat Unit 179A (437 ug/m^3) and in Unit 181A sub-slab vapor sample (3,970 ug/m^3). These two results are not below the 100 ug/m^3 shutdown criteria however, the result at 179A (437 ug/m^3) is below the "NO FURTHER ACTION". The result at Unit 181A (3,970 ug/m^3) is still at "MITIGATE" in the current Soil Vapor/Indoor Air Matrix B from May 2017. See Table 3 for the SVI Matrices comparison.

- The two Indoor air concentrations of PCE within the Laundromat were below the 3 ug/m^3 NO FURTHER ACTION requirements
- The Sub-slab vapor concentration of PCE below the laundromat were not less than 100 ug/m3

The Data Usability Summary Report for the soil vapor results is included in Attachment D.

Please call or email me if you have any questions.

Sincerely,
TYLL ENGINEERING AND CONSULTING, PC

Karen G. Tyll, PE
President

eCC Lois Reisman, Elks Plaza LLC

TABLES

Table 1
Elks Plaza, Freeport, NY
Volatile Organic Compounds in Air
by EPA Method TO-15

Analyte	Sample: / Date: / Units:	OA 3/23/2022	179A IA 3/23/2022	179A SSV 3/23/2022	181A IA 3/23/2022	181A SSV 3/23/2022
1,1,1-Trichloroethane	ug/m3	<1.09	<1.09	<1.09	<1.09	<10.9
1,1,2,2-Tetrachloroethane	ug/m3	<1.37	<1.37	<1.37	<1.37	<13.7
1,1,2-Trichloroethane	ug/m3	<1.09	<1.09	<1.09	<1.09	<10.9
1,1-Dichloroethane	ug/m3	<0.809	<0.809	<0.809	<0.809	<8.09
1,1-Dichloroethene	ug/m3	<0.079	<0.793	<0.079	<0.079	<7.93
1,2,4-Trichlorobenzene	ug/m3	<1.48	<1.48	<1.48	<1.48	<14.8
1,2,4-Trimethylbenzene	ug/m3	<0.983	<0.983	<0.983	<0.983	<9.83
1,2-Dibromoethane	ug/m3	<1.54	<1.54	<1.54	<1.54	<15.4
1,2-Dichlorobenzene	ug/m3	<1.20	<1.20	<1.20	<1.20	<12.0
1,2-Dichloroethane	ug/m3	<0.809	<0.809	<0.809	<0.809	<8.09
1,2-Dichloropropane	ug/m3	<0.924	<0.924	<0.924	<0.924	<9.24
1,3,5-Trimethylbenzene	ug/m3	<0.983	<0.983	<0.983	<0.983	<9.83
1,3-Butadiene	ug/m3	<0.442	<0.442	<0.442	<0.442	<4.42
1,3-Dichlorobenzene	ug/m3	<1.20	<1.20	<1.20	<1.20	<12.0
1,4-Dichlorobenzene	ug/m3	<1.20	1.95	1.58	2.06	<12.0
1,4-Dioxane	ug/m3	<0.721	<0.721	<0.721	<0.721	<7.21
2,2,4-Trimethylpentane	ug/m3	<0.934	<0.934	<0.934	<0.934	<9.34
2-Butanone	ug/m3	<1.47	<1.47	1.86	2.69	<14.7
2-Hexanone	ug/m3	<0.820	<0.820	<0.820	<0.820	<8.20
3-Chloropropene	ug/m3	<0.626	<0.626	<0.626	<0.626	<6.26
4-Ethyltoluene	ug/m3	<0.983	<0.983	<0.983	<0.983	<9.83
4-Methyl-2-pentanone	ug/m3	<2.05	<2.05	<2.05	<2.05	<20.5
Acetone	ug/m3	9.95	103	17.6	203	<23.8
Benzene	ug/m3	0.652	1.23	0.69	1.4	<6.39
Benzyl chloride	ug/m3	<1.04	<1.04	<1.04	<1.04	<10.4
Bromodichloromethane	ug/m3	<1.34	<1.34	<1.34	<1.34	<13.4
Bromoform	ug/m3	<2.07	<2.07	<2.07	<2.07	<20.7
Bromomethane	ug/m3	<0.777	<0.777	<0.777	<0.777	<7.77
Carbon disulfide	ug/m3	<0.623	0.666	<0.623	<0.623	<6.23
Carbon tetrachloride	ug/m3	0.541	<1.26	0.598	1.49	<12.6
Chlorobenzene	ug/m3	<0.921	<0.921	<0.921	<0.921	<9.21
Chloroethane	ug/m3	<0.528	<0.528	<0.528	<0.528	<5.28
Chloroform	ug/m3	<0.977	5.91	3.67	7.13	<9.77
Chloromethane	ug/m3	1.21	2.95	1.4	2.27	<4.13
cis-1,2-Dichloroethene	ug/m3	<0.079	<0.793	<0.079	<0.079	<7.93
cis-1,3-Dichloropropene	ug/m3	<0.908	<0.908	<0.908	<0.908	<9.08
Cyclohexane	ug/m3	<0.688	<0.688	14.7	<0.688	<6.88
Dibromochloromethane	ug/m3	<1.70	<1.70	<1.70	<1.70	<17.0
Dichlorodifluoromethane	ug/m3	2.67	2.65	2.65	2.66	<9.89
Ethanol	ug/m3	10.3	1030	119	829	<94.2

Table 1
Elks Plaza, Freeport, NY
Volatile Organic Compounds in Air
by EPA Method TO-15

Analyte	Sample: / Date: / Units:	OA 3/23/2022	179A IA 3/23/2022	179A SSV 3/23/2022	181A IA 3/23/2022	181A SSV 3/23/2022
Ethyl Acetate	ug/m3	<1.80	6.49	<1.80	10.1	<18.0
Ethylbenzene	ug/m3	<0.869	<0.869	0.947	<0.869	20.9
Freon-113	ug/m3	<1.53	<1.53	<1.53	<1.53	<15.3
Freon-114	ug/m3	<1.40	<1.40	<1.40	<1.40	<14.0
Heptane	ug/m3	<0.820	<0.820	<0.820	<0.820	<8.20
Hexachlorobutadiene	ug/m3	<2.13	<2.13	<2.13	<2.13	<21.3
Isopropanol	ug/m3	1.31	47.7	8.48	72.5	<12.3
Methyl tert butyl ether	ug/m3	<0.721	<0.721	<0.721	<0.721	<7.21
Methylene chloride	ug/m3	<1.74	<1.74	<1.74	<1.74	<17.4
n-Hexane	ug/m3	<0.705	0.962	0.712	1.13	<7.05
o-Xylene	ug/m3	<0.869	<0.869	<0.869	<0.869	<8.69
p/m-Xylene	ug/m3	<1.74	<1.74	2.25	<1.74	<17.4
Styrene	ug/m3	<0.852	<0.852	<0.852	<0.852	<8.52
Tertiary butyl Alcohol	ug/m3	<1.52	<1.52	3.58	<1.52	<15.2
Tetrachloroethene	ug/m3	4.37	1.46	437	1.02	3970
Tetrahydrofuran	ug/m3	<1.47	<1.47	<1.47	<1.47	<14.7
Toluene	ug/m3	<0.754	2.44	8.63	3.23	19.3
trans-1,2-Dichloroethene	ug/m3	<0.793	<0.793	<0.793	<0.793	<7.93
trans-1,3-Dichloropropene	ug/m3	<0.908	<0.908	<0.908	<0.908	<9.08
Trichloroethene	ug/m3	<0.107	<1.07	5.22	<0.107	<10.7
Trichlorofluoromethane	ug/m3	1.15	2.23	3.77	2.11	<11.2
Vinyl bromide	ug/m3	<0.874	<0.874	<0.874	<0.874	<8.74
Vinyl chloride	ug/m3	<0.051	<0.511	<0.051	<0.051	<5.11

Table 2 - Comparison from 2020 to 2022

Elks Plaza, Freeport, NY

Volatile Organic Compounds in Air

by EPA Method TO-15

	Sample:	OA			179A IA			179A SSV			181A IA			181A SSV			171 IA
	Date:	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020
Analyte	Units:																
1,1,1-Trichloroethane	ug/m3	<0.109	<0.109	<0.109	<1.09	<1.09	<1.09	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<2.18	<9.33	<10.9	<0.109
1,1,2,2-Tetrachloroethane	ug/m3	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<2.75	<117.	<13.7	<1.37
1,1,2-Trichloroethane	ug/m3	<1.09	<0.809	<1.09	<1.09	<0.809	<1.09	<1.09	<0.809	<1.09	<1.09	<0.809	<1.09	<2.18	<69.2	<10.9	<1.09
1,1-Dichloroethane	ug/m3	<0.809	<0.079	<0.809	<0.809	<0.793	<0.809	<0.809	<0.079	<0.809	<0.809	<0.079	<0.809	<1.62	<67.8	<8.09	<0.809
1,1-Dichloroethene	ug/m3	<0.079	<1.09	<0.079	<0.793	<1.09	<0.793	<0.079	<1.09	<0.079	<0.079	<1.09	<0.079	<1.59	<9.33	<7.93	<0.079
1,2,4-Trichlorobenzene	ug/m3	<1.48	<1.54	<1.48	<1.48	<1.54	<1.48	<1.48	<1.54	<1.48	<1.48	<1.54	<1.48	<2.97	<131.	<14.8	<1.48
1,2,4-Trimethylbenzene	ug/m3	<0.983	<1.20	<0.983	3.3	<1.20	<0.983	1.21	<1.20	<0.983	1.37	<1.20	<0.983	24.1	<103.	<9.83	1.2
1,2-Dibromoethane	ug/m3	<1.54	<0.809	<1.54	<1.54	<0.809	<1.54	<1.54	<0.809	<1.54	<1.54	<0.809	<1.54	<3.07	<69.2	<15.4	<1.54
1,2-Dichlorobenzene	ug/m3	<1.20	<0.924	<1.20	<1.20	<0.924	<1.20	<1.20	<0.924	<1.20	<1.20	<0.924	<1.20	<2.40	<79.0	<12.0	<1.20
1,2-Dichloroethane	ug/m3	<0.809	<1.48	<0.809	<0.809	<1.48	<0.809	<0.809	<1.48	<0.809	<0.809	<1.48	<0.809	<1.62	<127.	<8.09	<0.809
1,2-Dichloropropane	ug/m3	<0.924	<0.983	<0.924	<0.924	23.7	<0.924	<0.924	<0.983	<0.924	<0.924	<0.983	<0.924	<1.85	<84.1	<9.24	<0.924
1,3,5-Trimethylbenzene	ug/m3	<0.983	<0.442	<0.983	<0.983	<0.442	<0.983	<0.983	<0.442	<0.983	<0.983	<0.442	<0.983	6.54	<37.8	<9.83	<0.983
1,3-Butadiene	ug/m3	<0.442	<1.20	<0.442	<0.442	<1.20	<0.442	<0.442	<1.20	<0.442	<0.442	<1.20	<0.442	1.38	<103.	<4.42	<0.442
1,3-Dichlorobenzene	ug/m3	<1.20	<0.983	<1.20	<1.20	6.39	<1.20	<1.20	<0.983	<1.20	<1.20	<0.983	<1.20	<2.40	<84.1	<12.0	<1.20
1,4-Dichlorobenzene	ug/m3	<1.20	<1.20	<1.20	<1.20	<1.20	1.95	<1.20	<1.20	1.58	<1.20	<1.20	2.06	<2.40	<103.	<12.0	<1.20
1,4-Dioxane	ug/m3	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<1.44	<61.6	<7.21	<0.721
2,2,4-Trimethylpentane	ug/m3	<0.934	<1.47	<0.934	1.44	20.5	<0.934	<0.934	<1.47	<0.934	<0.934	<1.47	<0.934	<1.87	321	<9.34	<0.934
2-Butanone	ug/m3	1.51	<0.820	<1.47	3.63	<0.820	<1.47	<1.47	<0.820	1.86	1.52	<0.820	2.69	6.81	<70.1	<14.7	<1.47
2-Hexanone	ug/m3	<0.820	<0.934	<0.820	<0.820	1.96	<0.820	<0.820	0.958	<0.820	<0.820	1.19	<0.820	<1.64	<79.9	<8.20	<0.820
3-Chloropropene	ug/m3	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<1.25	<53.5	<6.26	<0.626
4-Ethyltoluene	ug/m3	<0.983	<0.983	<0.983	<0.983	6.69	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	4.65	<84.1	<9.83	<0.983
4-Methyl-2-pentanone	ug/m3	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<2.05	<4.10	<175.	<20.5	<2.05
Acetone	ug/m3	16	5.72	9.95	116	47.7	103	88.1	85.3	17.6	105	155	203	137	6600	<23.8	49.4
Benzene	ug/m3	0.757	<0.639	0.652	2.66	4.82	1.23	2.15	1.72	0.69	2.12	2	1.4	3.55	<54.6	<6.39	1.5
Benzyl chloride	ug/m3	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<2.07	<88.5	<10.4	<1.04
Bromodichloromethane	ug/m3	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<2.68	<115.	<13.4	<1.34
Bromoform	ug/m3	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<2.07	<4.14	<177.	<20.7	<2.07
Bromomethane	ug/m3	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<0.777	<1.55	<66.4	<7.77	<0.777
Carbon disulfide	ug/m3	<0.623	<0.623	<0.623	<0.623	<0.623	0.666	<0.623	<0.623	<0.623	<0.623	<0.623	<0.623	1.83	<53.3	<6.23	<0.623
Carbon tetrachloride	ug/m3	0.384	0.39	0.541	<1.26	<1.26	<1.26	0.484	0.925	0.598	0.434	1.05	1.49	<2.52	<10.8	<12.6	0.421
Chlorobenzene	ug/m3	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<0.921	<1.84	<78.8	<9.21	<0.921
Chloroethane	ug/m3	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<1.06	<45.1	<5.28	<0.528
Chloroform	ug/m3	<0.977	<0.977	<0.977	3.28	3.75	5.91	1.5	6.98	3.67	1.63	7.57	7.13	2.58	<83.5	<9.77	<0.977
Chloromethane	ug/m3	1.07	1.17	1.21	1.35	2.75	2.95	1.33	5.66	1.4	1.25	11.1	2.27	<0.826	<35.3	<4.13	1.06
cis-1,2-Dichloroethene	ug/m3	<0.079	<0.079	<0.079	<0.793	<0.793	<0.793	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<1.59	<6.78	<7.93	<0.079
cis-1,3-Dichloropropene	ug/m3	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<1.82	<77.6	<9.08	<0.908
Cyclohexane	ug/m3	<0.688	<0.688	<0.688	1.22	1.88	<0.688	<0.688	<0.688	14.7	<0.688	<0.688	<0.688	3.44	647	<6.88	<0.688
Dibromochloromethane	ug/m3	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<3.41	<146.	<17.0	<1.70
Dichlorodifluoromethane	ug/m3	2.12	2.02	2.67	2.42	2.04	2.65	2.34	2.09	2.65	2.25	2.12	2.66	2.45	<84.6	<9.89	2.34
Ethanol	ug/m3	25.1	15.1	10.3	452	121	1030	535	556	119	686	742	829	124	<805	<94.2	626
Ethyl Acetate	ug/m3	<1.80	<1.80	<1.80	4.29	<1.80	6.49	5.51	6.27	<1.80	6.96	9.77	10.1	<3.60	<154.	<18.0	7.1
Ethylbenzene	ug/m3	<0.869	<0.869	<0.869	1.33	15	<0.869	<0.869	<0.869	0.947	<0.869	<0.869	<0.869	10	<74.3	20.9	<0.869
Freon-113	ug/m3	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<3.07	<131.	<15.3	<1.53
Freon-114	ug/m3	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<2.80	<120.	<14.0	<1.40
Heptane	ug/m3	<0.820	<0.820	<0.820	1.91	7.13	<0.820	<0.820	1.08	<0.820	0.947	1.33	<0.820	5.98	<70.1	<8.20	<0.820
Hexachlorobutadiene	ug/m3	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<2.13	<4.27	<182.	<21.3	<2.13
Isopropanol	ug/m3	1.54	<1.23	1.31	71.8	21.2	47.7	88.5	84.6	8.48	104	141	72.5	11.4	114	<12.3	65.9
Methyl tert butyl ether	ug/m3	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<1.44	<61.7	<7.21	<0.721
Methylene chloride	ug/m3	<1.74	<1.74	<1.74	<1.74	10.9	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<3.47	<148	<17.4	<1.74
n-Hexane	ug/m3	<0.705	<0.705	<0.705	3.15	6.94	0.962	1.13	1.67	0.712	1.15	2.03	1.13	6.91	<60.3	<7.05	1.02

Table 2 - Comparison from 2020 to 2022

Elks Plaza, Freeport, NY

Volatile Organic Compounds in Air

by EPA Method TO-15

	Sample:	OA			179A IA			179A SSV			181A IA			181A SSV			171 IA
	Date:	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020	3/30/2021	3/23/2022	1/15/2020
Analyte	Units:																
o-Xylene	ug/m3	<0.869	<0.869	<0.869	2.06	20.4	<0.869	<0.869	<0.869	<0.869	<0.869	<0.869	<0.869	17.9	<74.3	<8.69	<0.869
p/m-Xylene	ug/m3	<1.74	<1.74	<1.74	4.78	61.2	<1.74	<1.74	<1.74	2.25	<1.74	<1.74	<1.74	41.6	<148.	<17.4	<1.74
Styrene	ug/m3	<0.852	<0.852	<0.852	<0.852	1.61	<0.852	<0.852	<0.852	<0.852	<0.852	<0.852	<0.852	<1.70	<72.8	<8.52	<0.852
Tertiary butyl Alcohol	ug/m3	<1.52	<1.52	<1.52	<1.52	2.58	<1.52	<1.52	<1.52	3.58	<1.52	<1.52	<1.52	<3.03	870	<15.2	<1.52
Tetrachloroethene	ug/m3	0.441	<0.136	4.37	<1.36	12.8	1.46	0.373	0.285	437	0.427	0.312	1.02	922	<11.6	3970	0.319
Tetrahydrofuran	ug/m3	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<2.95	<126.	<14.7	<1.47
Toluene	ug/m3	1.44	<0.754	<0.754	6.07	59.5	2.44	3.19	5.99	8.63	3.75	6.63	3.23	23.1	19800	19.3	3.21
trans-1,2-Dichloroethene	ug/m3	<0.793	<0.793	<0.793	<0.793	0.797	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<1.59	<67.8	<7.93	<0.793
trans-1,3-Dichloropropene	ug/m3	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<1.82	<77.6	<9.08	<0.908
Trichloroethene	ug/m3	<0.107	<0.107	<1.07	<1.07	<1.07	<1.07	<0.107	<0.107	5.22	<0.107	<0.107	<1.07	3.47	<9.19	<10.7	<0.107
Trichlorofluoromethane	ug/m3	<1.12	<1.12	1.15	2.35	2.3	2.23	2.46	1.75	3.77	2.73	2.06	2.11	4.74	<96.1	<11.2	2.39
Vinyl bromide	ug/m3	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<0.874	<1.75	<74.8	<8.74	<0.874
Vinyl chloride	ug/m3	<0.051	<0.051	<0.051	<0.511	<0.511	<0.511	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<1.02	<4.37	<5.11	<0.051

Listed on the NYSDOH SVI Decision Matrices.

TABLE 3
Comparison to the NYSDOH Soil Vapor/Indoor Air Matrix B (May 2017)

NYSDOH Decision Matrix B Sample Location 179A			Indoor Air Concentration - Tetrachloroethene (PCE) (µg/m³)		
			< 3	3 to < 10	10 and Above
			1.46		
Sub-Slab Concentration - Tetrachloroethene (PCE) (ug/m3)	< 100		1. No further Action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
	100 to < 1,000	**437**	4. No Further Action	5. MONITOR	6. MITIGATE
	1,000 and Above		7. MITIGATE	8. MITIGATE	9. MITIGATE

NYSDOH Decision Matrix B Sample Location 181A			Indoor Air Concentration - Tetrachloroethene (PCE) (µg/m³)		
			< 3	3 to < 10	10 and Above
			1.02		
Sub-Slab Concentration - Tetrachloroethene (PCE) (ug/m3)	< 100		1. No further Action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
	100 to < 1,000		4. No Further Action	5. MONITOR	6. MITIGATE
	1,000 and Above	**3970**	7. MITIGATE	8. MITIGATE	9. MITIGATE

FIGURES

PREPARED BY:

TYLL ENGINEERING & CONSULTING PC
169 Commack Road, Suite H173, Commack, NY 11725
PHONE: (631) 629-5373 Info@tyllengineering.com

TITLE:

SVI SAMPLE MAP

ELKS PLAZA
FREEPORT, NY

DWN:	SCALE:	DATE:	PROJECT NO.:
-	NTS	4-03-22	ELK2201
CHKD:	APPD:	REV.:	NOTES:
KT	KT	-	-

FIGURE NO.: 1

Attachment A

Canister Field Sampling Record Logs

Tyll Engineering And Consulting

CANISTER FIELD SAMPLING RECORD

Date: 03/23/2022

Project: Elks Plaza

Site Location: 157 - 189 West Merrick Road, Freeport, New York

Sample ID: 181A SSV

Sampler: K.Tyll

Location: by front desk

Height: 1.5 ft

Canister ID: 346

Canister Volume: 2.7 liter

Flow Controller ID: 0774

Flow Controller Setting: 8 hour

Sample Type (sub-slab, soil gas, amb, indoor): SSV

READING	DATE	TIME	VACUUM
Initial Canister Vacuum	3/23/22	7:35 AM	30.63
Final Canister Vacuum	3/23/22	1535	-9.04

Weather or Ambient Conditions:

PID at Location: 7.9 ppm

Comments:

Tyll Engineering And Consulting

CANISTER FIELD SAMPLING RECORD

Date: 03/23/2022

Project: Elks Plaza

Site Location: 157 - 189 West Merrick Road, Freeport, New York

Sample ID: 181 A IA

Sampler: K.Tyll

Location: Table in Corner

Height: 4' 8"

Canister ID: 529

Canister Volume: 2706 liter

Flow Controller ID: 01604

Flow Controller Setting: 8 hour

Sample Type (sub-slab, soil gas, amb, indoor): indoor

READING	DATE	TIME	VACUUM
Initial Canister Vacuum	3/23/22	7:36	-30.44
Final Canister Vacuum	3/23/22	1537	-13.03

Weather or Ambient Conditions:

PID at Location: 7.8 ppm

Comments:

Tyll Engineering And Consulting

CANISTER FIELD SAMPLING RECORD

Date: 03/23/2022

Project: Elks Plaza

Site Location: 157 - 189 West Merrick Road, Freeport, New York

Sample ID: OA

Sampler: K.Tyll

Location: outside

Height:

Canister ID: 3415

Canister Volume: 2.7 liter

Flow Controller ID: 01768

Flow Controller Setting: 8 hour

Sample Type (sub-slab, soil gas, amb, indoor): Ambient (outdoor)

READING	DATE	TIME	VACUUM
Initial Canister Vacuum	3/23/22	742	-29.68
Final Canister Vacuum	3/23/22	1543	-5.04

Weather or Ambient Conditions:

PID at Location: 0.1 ppm

Comments:

Tyll Engineering And Consulting

CANISTER FIELD SAMPLING RECORD

Date: 03/23/2022

Project: Elks Plaza

Site Location: 157 - 189 West Merrick Road, Freeport, New York

Sample ID: 179A 1A

Sampler: K.Tyll

Location: Table in middle

Height: 6'

Canister ID: 539

Canister Volume: 2.7 liter

Flow Controller ID: 01791

Flow Controller Setting: 8 hour

Sample Type (sub-slab, soil gas, amb, indoor): indoor

READING	DATE	TIME	VACUUM
Initial Canister Vacuum	3/23/22	7:50	-30.52
Final Canister Vacuum	3/23/22	15:51	-13.51

Weather or Ambient Conditions:

PID at Location: 17 ppm

Comments:

Tyll Engineering And Consulting

CANISTER FIELD SAMPLING RECORD

Date: 03/23/2022

Project: Elks Plaza

Site Location: 157 - 189 West Merrick Road, Freeport, New York

Sample ID: 179A SSV

Sampler: K.Tyll

Location: by soap dispensers

Height: 18"

Canister ID: 497

Canister Volume: 2.7 liter

Flow Controller ID: 01553

Flow Controller Setting: 8 hour

Sample Type (sub-slab, soil gas, amb, indoor): SSV

READING	DATE	TIME	VACUUM
Initial Canister Vacuum	3/23/22	758	-30.75
Final Canister Vacuum	3/23/22	1603	-7.00

Weather or Ambient Conditions:

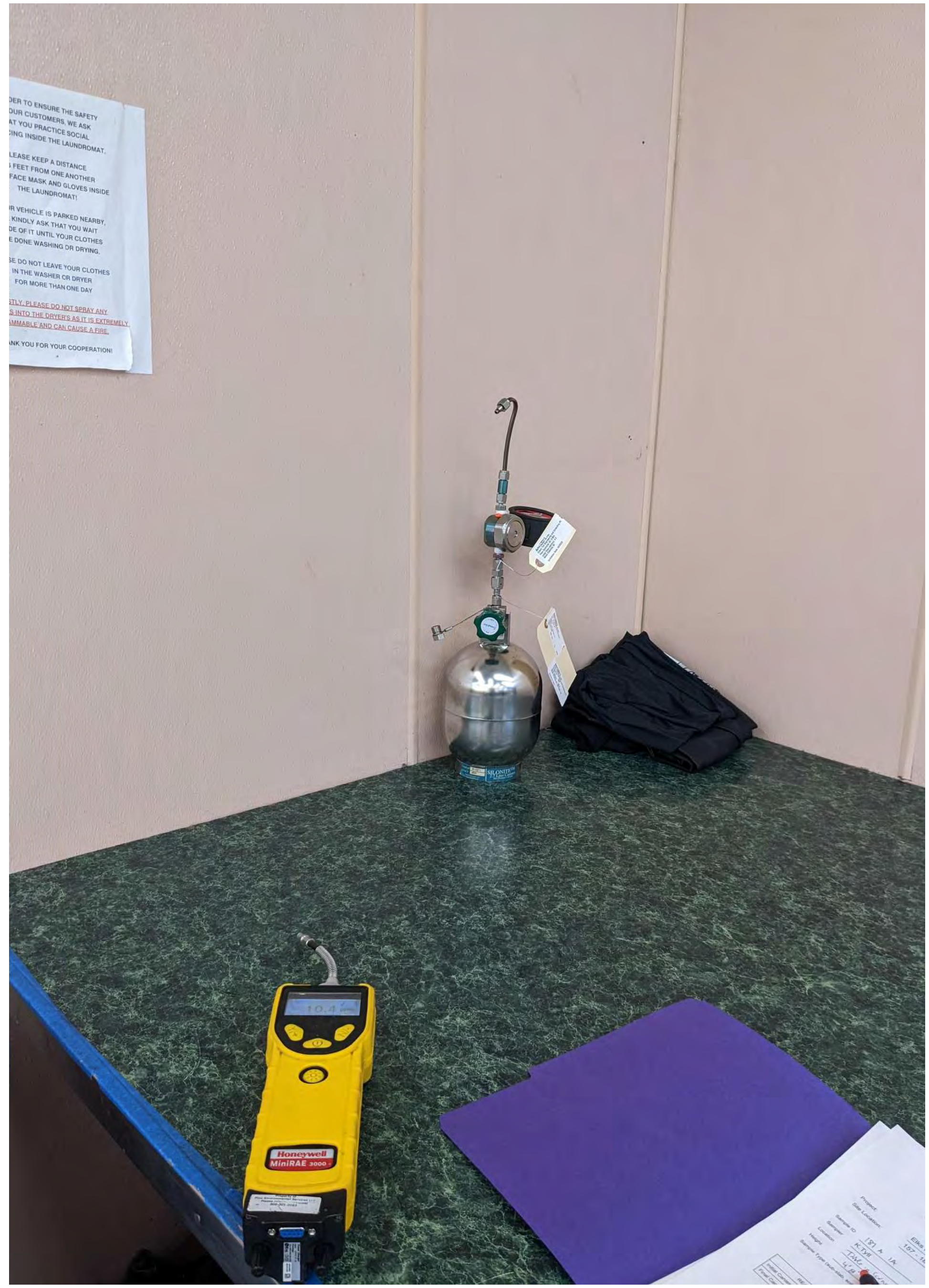
PID at Location: 14.8 ppm

Comments:

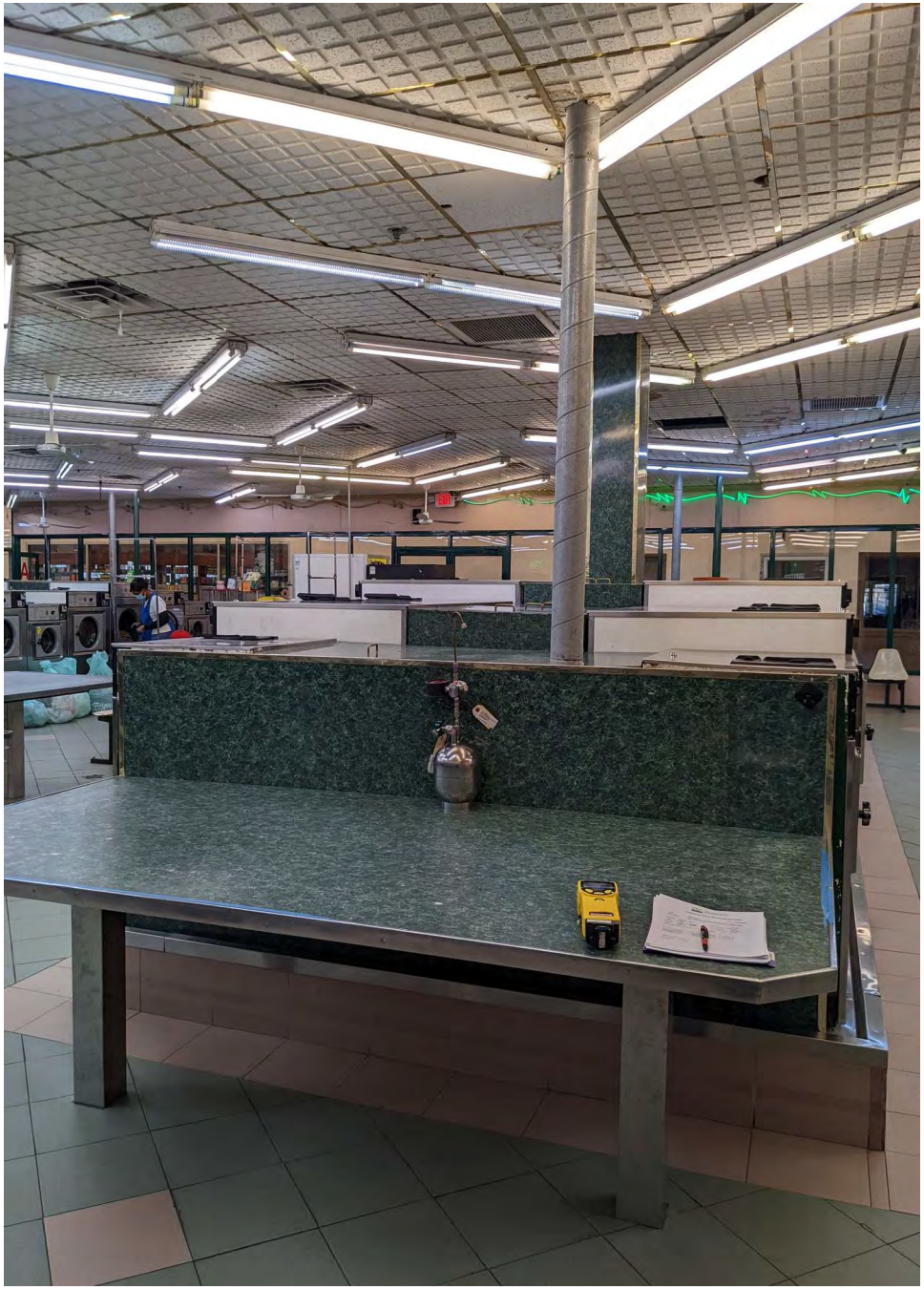
Attachment B

Photos


DO LAUNDRY.
$1. $5.
$20
$1. $5.
$ 1.5.10.20
change
Help Wanted
Se necesita empleada
Part-Time job
Trabajo de medio tiempo
Time to be determined
$10 $20
BILL DISPENSER


Honeywell
MiniRAE 3000


FIRE
EXTINGUISHER
SOAP
BLEACH
SOFTENERS
LAUNDRY
BAGS
SOAP
BLEACH
SOFTENERS
Coca-Cola



OUTDOOR AIR SAMPLE

OFFICE - DETERGENT AND FABRIC SOFTENERS FOR PURCHASE

AURA DETERGENTS AND FABRIC SOFTENER DRUMS

AURA BLEACH

AURA DETERGENT

AURA DETERGENT

Random cleaning supplies and detergents in Office

Attachment C

Laboratory Analytical

ANALYTICAL REPORT

Lab Number:	L2215158
Client:	Tyll Engineering and Consulting PC 169 Commack Road Suite H173 Commack, NY 11725
ATTN:	Karen Tyll
Phone:	(631) 664-6477
Project Name:	ELKS PLAZA
Project Number:	Not Specified
Report Date:	04/06/22

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2215158-01	181A SSV	SOIL_VAPOR	157-189 WEST MERRICK RD FREEPORT	03/23/22 15:35	03/23/22
L2215158-02	181A IA	AIR	157-189 WEST MERRICK RD FREEPORT	03/23/22 15:37	03/23/22
L2215158-03	OA	AIR	157-189 WEST MERRICK RD FREEPORT	03/23/22 15:43	03/23/22
L2215158-04	179A SSV	SOIL_VAPOR	157-189 WEST MERRICK RD FREEPORT	03/23/22 15:51	03/23/22
L2215158-05	179A IA	AIR	157-189 WEST MERRICK RD FREEPORT	03/23/22 15:03	03/23/22

Project Name:	ELKS PLAZA	**Lab Number:**	L2215158
Project Number:	Not Specified	**Report Date:**	04/06/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on March 23, 2022. The canister certification results are provided as an addendum.

L2215158-01D and -04D: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

L2215158-04: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 04/06/22

AIR

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-01 D
Client ID: 181A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:35
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/06/22 06:47
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	ND	2.00	--	ND	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	ND	50.0	--	ND	94.2	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	ND	10.0	--	ND	23.8	--		10
Trichlorofluoromethane	ND	2.00	--	ND	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Tertiary butyl Alcohol	ND	5.00	--	ND	15.2	--		10
Methylene chloride	ND	5.00	--	ND	17.4	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	ND	2.00	--	ND	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
2-Butanone	ND	5.00	--	ND	14.7	--		10
cis-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-01 D
Client ID: 181A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:35
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	ND	2.00	--	ND	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	ND	2.00	--	ND	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	5.13	2.00	--	19.3	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	586	2.00	--	3970	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	4.81	2.00	--	20.9	8.69	--		10

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-01 D
Client ID: 181A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:35
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	4.00	--	ND	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	ND	2.00	--	ND	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-02
Client ID: 181A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:37
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/06/22 00:33
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.537	0.200	--	2.66	0.989	--		1
Chloromethane	1.10	0.200	--	2.27	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	440	5.00	--	829	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	85.6	1.00	--	203	2.38	--		1
Trichlorofluoromethane	0.376	0.200	--	2.11	1.12	--		1
Isopropanol	29.5	0.500	--	72.5	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.913	0.500	--	2.69	1.47	--		1
Ethyl Acetate	2.79	0.500	--	10.1	1.80	--		1
Chloroform	1.46	0.200	--	7.13	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-02
Client ID: 181A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:37
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.321	0.200	--	1.13	0.705	--		1
Benzene	0.438	0.200	--	1.40	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.858	0.200	--	3.23	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-02
Client ID: 181A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:37
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	0.342	0.200	--	2.06	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	94		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-02
Client ID: 181A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:37
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/06/22 00:33
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.237	0.020	--	1.49	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.150	0.020	--	1.02	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	96		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-03
Client ID: OA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:43
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/05/22 18:16
Analyst: TS

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.539	0.200	--	2.67	0.989	--		1
Chloromethane	0.586	0.200	--	1.21	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	5.44	5.00	--	10.3	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.19	1.00	--	9.95	2.38	--		1
Trichlorofluoromethane	0.204	0.200	--	1.15	1.12	--		1
Isopropanol	0.534	0.500	--	1.31	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-03
Client ID: OA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:43
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.204	0.200	--	0.652	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-03
Client ID: OA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:43
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	95		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-03
Client ID: OA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:43
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/05/22 18:16
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.086	0.020	--	0.541	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.644	0.020	--	4.37	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-04
Client ID: 179A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:51
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/06/22 07:27
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.535	0.200	--	2.65	0.989	--		1
Chloromethane	1.43	0.200	--	2.95	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	544	5.00	--	1030	9.42	--	E	1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	43.4	1.00	--	103	2.38	--		1
Trichlorofluoromethane	0.396	0.200	--	2.23	1.12	--		1
Isopropanol	19.4	0.500	--	47.7	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.214	0.200	--	0.666	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-04
Client ID: 179A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT
Date Collected: 03/23/22 15:51
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	1.80	0.500	--	6.49	1.80	--		1
Chloroform	1.21	0.200	--	5.91	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.273	0.200	--	0.962	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.385	0.200	--	1.23	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.648	0.200	--	2.44	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	0.216	0.200	--	1.46	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-04
Client ID: 179A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:51
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	0.325	0.200	--	1.95	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-04 D
Client ID: 179A SSV
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:51
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/06/22 09:57
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Ethanol	624	12.5	--	1180	23.6	--		2.5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	89		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	89		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-05
Client ID: 179A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT
Date Collected: 03/23/22 15:03
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/06/22 01:17
Analyst: TS

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.535	0.200	--	2.65	0.989	--		1
Chloromethane	0.676	0.200	--	1.40	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	63.3	5.00	--	119	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	7.42	1.00	--	17.6	2.38	--		1
Trichlorofluoromethane	0.670	0.200	--	3.77	1.12	--		1
Isopropanol	3.45	0.500	--	8.48	1.23	--		1
Tertiary butyl Alcohol	1.18	0.500	--	3.58	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.631	0.500	--	1.86	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.751	0.200	--	3.67	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-05
Client ID: 179A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:03
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.202	0.200	--	0.712	0.705	--		1
Benzene	0.216	0.200	--	0.690	0.639	--		1
Cyclohexane	4.27	0.200	--	14.7	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	2.29	0.200	--	8.63	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	64.4	0.200	--	437	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.218	0.200	--	0.947	0.869	--		1
p/m-Xylene	0.517	0.400	--	2.25	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-05
Client ID: 179A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:03
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	0.263	0.200	--	1.58	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	93		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

SAMPLE RESULTS

Lab ID: L2215158-05
Client ID: 179A IA
Sample Location: 157-189 WEST MERRICK RD FREEPORT

Date Collected: 03/23/22 15:03
Date Received: 03/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/06/22 01:17
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.095	0.020	--	0.598	0.126	--		1
Trichloroethene	0.972	0.020	--	5.22	0.107	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/22 15:59

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1623801-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/22 15:59

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1623801-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/22 15:59

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1623801-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 04/05/22 16:38

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 02-03,05 Batch: WG1623802-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Lab Control Sample Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1623801-3								
Dichlorodifluoromethane	99		-		70-130	-		
Chloromethane	98		-		70-130	-		
Freon-114	102		-		70-130	-		
Vinyl chloride	104		-		70-130	-		
1,3-Butadiene	110		-		70-130	-		
Bromomethane	103		-		70-130	-		
Chloroethane	98		-		70-130	-		
Ethanol	103		-		40-160	-		
Vinyl bromide	97		-		70-130	-		
Acetone	110		-		40-160	-		
Trichlorofluoromethane	104		-		70-130	-		
Isopropanol	95		-		40-160	-		
1,1-Dichloroethene	102		-		70-130	-		
Tertiary butyl Alcohol	98		-		70-130	-		
Methylene chloride	101		-		70-130	-		
3-Chloropropene	98		-		70-130	-		
Carbon disulfide	94		-		70-130	-		
Freon-113	100		-		70-130	-		
trans-1,2-Dichloroethene	98		-		70-130	-		
1,1-Dichloroethane	100		-		70-130	-		
Methyl tert butyl ether	98		-		70-130	-		
2-Butanone	91		-		70-130	-		
cis-1,2-Dichloroethene	103		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1623801-3								
Ethyl Acetate	106		-		70-130	-		
Chloroform	107		-		70-130	-		
Tetrahydrofuran	91		-		70-130	-		
1,2-Dichloroethane	98		-		70-130	-		
n-Hexane	109		-		70-130	-		
1,1,1-Trichloroethane	103		-		70-130	-		
Benzene	96		-		70-130	-		
Carbon tetrachloride	106		-		70-130	-		
Cyclohexane	109		-		70-130	-		
1,2-Dichloropropane	105		-		70-130	-		
Bromodichloromethane	109		-		70-130	-		
1,4-Dioxane	104		-		70-130	-		
Trichloroethene	108		-		70-130	-		
2,2,4-Trimethylpentane	109		-		70-130	-		
Heptane	100		-		70-130	-		
cis-1,3-Dichloropropene	109		-		70-130	-		
4-Methyl-2-pentanone	100		-		70-130	-		
trans-1,3-Dichloropropene	94		-		70-130	-		
1,1,2-Trichloroethane	105		-		70-130	-		
Toluene	96		-		70-130	-		
2-Hexanone	100		-		70-130	-		
Dibromochloromethane	110		-		70-130	-		
1,2-Dibromoethane	99		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1623801-3								
Tetrachloroethene	104		-		70-130	-		
Chlorobenzene	101		-		70-130	-		
Ethylbenzene	102		-		70-130	-		
p/m-Xylene	104		-		70-130	-		
Bromoform	112		-		70-130	-		
Styrene	100		-		70-130	-		
1,1,2,2-Tetrachloroethane	106		-		70-130	-		
o-Xylene	106		-		70-130	-		
4-Ethyltoluene	99		-		70-130	-		
1,3,5-Trimethylbenzene	90		-		70-130	-		
1,2,4-Trimethylbenzene	106		-		70-130	-		
Benzyl chloride	100		-		70-130	-		
1,3-Dichlorobenzene	106		-		70-130	-		
1,4-Dichlorobenzene	103		-		70-130	-		
1,2-Dichlorobenzene	104		-		70-130	-		
1,2,4-Trichlorobenzene	103		-		70-130	-		
Hexachlorobutadiene	111		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 02-03,05 Batch: WG1623802-3								
Vinyl chloride	111		-		70-130	-		25
1,1-Dichloroethene	108		-		70-130	-		25
cis-1,2-Dichloroethene	110		-		70-130	-		25
1,1,1-Trichloroethane	100		-		70-130	-		25
Carbon tetrachloride	103		-		70-130	-		25
Trichloroethene	114		-		70-130	-		25
Tetrachloroethene	107		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1623801-5 QC Sample: L2215158-05 Client ID: 179A IA						
Dichlorodifluoromethane	0.535	0.528	ppbV	1		25
Chloromethane	0.676	0.658	ppbV	3		25
Freon-114	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	63.3	62.2	ppbV	2		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	7.42	7.29	ppbV	2		25
Trichlorofluoromethane	0.670	0.535	ppbV	22		25
Isopropanol	3.45	2.97	ppbV	15		25
Tertiary butyl Alcohol	1.18	1.18	ppbV	0		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	0.631	0.633	ppbV	0		25
Ethyl Acetate	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1623801-5 QC Sample: L2215158-05 Client ID: 179A IA						
Chloroform	0.751	0.724	ppbV	4		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	0.202	0.204	ppbV	1		25
Benzene	0.216	0.219	ppbV	1		25
Cyclohexane	4.27	4.25	ppbV	0		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	2.29	2.15	ppbV	6		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	64.4	60.9	ppbV	6		25
Chlorobenzene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1623801-5 QC Sample: L2215158-05 Client ID: 179A IA						
Ethylbenzene	0.218	0.201	ppbV	8		25
p/m-Xylene	0.517	0.488	ppbV	6		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	0.263	0.244	ppbV	7		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 02-03,05 QC Batch ID: WG1623802-5 QC Sample: L2215158-05 Client ID: 179A IA						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.095	0.098	ppbV	3		25
Trichloroethene	0.972	0.953	ppbV	2		25

Project Name: ELKS PLAZA

Lab Number: L2215158

Project Number:

Report Date: 04/06/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2215158-01	181A SSV	0774	Flow 5	03/23/22	381290		-	-	-	Pass	4.5	4.2	7
L2215158-01	181A SSV	346	2.7L Can	03/23/22	381290	L2214158-05	Pass	-29.0	-7.7	-	-	-	-
L2215158-02	181A IA	01604	Flow 4	03/23/22	381290		-	-	-	Pass	4.5	4.0	12
L2215158-02	181A IA	529	2.7L Can	03/23/22	381290	L2214158-05	Pass	-29.4	-13.0	-	-	-	-
L2215158-03	OA	01768	Flow 4	03/23/22	381290		-	-	-	Pass	4.5	4.3	5
L2215158-03	OA	3415	2.7L Can	03/23/22	381290	L2214158-05	Pass	-29.3	-3.7	-	-	-	-
L2215158-04	179A SSV	01791	Flow 4	03/23/22	381290		-	-	-	Pass	4.5	4.2	7
L2215158-04	179A SSV	539	2.7L Can	03/23/22	381290	L2214158-01	Pass	-29.4	-5.6	-	-	-	-
L2215158-05	179A IA	01553	Flow 4	03/23/22	381290		-	-	-	Pass	4.5	3.3	31
L2215158-05	179A IA	497	2.7L Can	03/23/22	381290	L2214158-05	Pass	-29.3	-12.0	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/18/22 18:44
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	97		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/18/22 18:44
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-01
Client ID: CAN 2374 SHELF 1
Sample Location:

Date Collected: 03/17/22 18:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/18/22 21:20
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
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Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/18/22 21:20
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
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Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2214158
Report Date: 04/06/22

Air Canister Certification Results

Lab ID: L2214158-05
Client ID: CAN 1804 SHELF 6
Sample Location:

Date Collected: 03/18/22 09:00
Date Received: 03/18/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	92		60-140

Project Name: ELKS PLAZA
Project Number: Not Specified

Lab Number: L2215158
Report Date: 04/06/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2215158-01A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2215158-02A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2215158-03A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2215158-04A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2215158-05A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	ELKS PLAZA	**Lab Number:**	L2215158
Project Number:	Not Specified	**Report Date:**	04/06/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	ELKS PLAZA	**Lab Number:**	L2215158
Project Number:	Not Specified	**Report Date:**	04/06/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	ELKS PLAZA	**Lab Number:**	L2215158
Project Number:	Not Specified	**Report Date:**	04/06/22

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name: ELKS PLAZA
Project Number: Not Specified
Lab Number: L2215158
Report Date: 04/06/22

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/24/22

ALPHA Job #: L2215158

Client Information

Client: Tyll Engineering and Consulting
Address: 149 Commack Rd, Suite H173
Commack NY 11725
Phone: 631 664 6477
Fax:
Email: Karen@tyllengineering.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Elks Plaza
Project Location: 157-189 West Merrick Rd Freeport
Project #:
Project Manager: Karen Tyll
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats: excel
☒ EMAIL (standard pdf report)
☒ Additional Deliverables: Cat B
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH (Subset non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
L2215158-01	181A SSV	3/23/22	0735	1535	-30.63	-9.04	SV	KT	2.7L	346	0774	X					
02	181A IA	3/23/22	0736	1537	-30.44	-13.03	AA	KT	2.7L	529	01604	X					
03	OA	3/23/22	0742	15.43	-29.68	-5.04	AA	KT	2.7L	3415	01768	X					
04	179A SSV	3/23/22	0750	1551	-30.52	-13.51	SV	KT	2.7L	539	01791	X					
05	179A IA	3/23/22	0758	1603	-30.75	-7.0	AA	KT	2.7L	497	01553	X					

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Karen Tyll	3/23/22 1640	[illegible]	3/23/22 16:40
[illegible]	3/23/22 1880	[illegible]	3/23/22 2000
[illegible]	3/24/22 0545	[illegible]	3/24/22 0045

Form No: 101-02 Rev (25-Sep-15)

Attachment D

Data Usability Summary Report

L.A.B. Validation Corp. 14 West Point Drive, East Northport, N.Y. 11731

DATA USABILITY SUMMARY REPORT (DUSR)

ORGANIC ANALYSIS

EPA Compendium Method TO-15
LOW LEVEL VOLATILES BY GC/MS
For Soil Vapor and Ambient Air Samples
Collected March 23, 2022
From Elks Plaza
157-189 West Merrick Road, Freeport, New York
by Tyll Engineering

SAMPLE DELIVERY GROUP NUMBER:
L2215158
Alpha Analytical (ELAP #11148)

SUBMITTED TO:

Ms. Karen Tyll
Tyll Engineering and Consulting
169 Commack Road, Suite H173
Commack, New York 11725

April 24, 2022

PREPARED BY:

Lori A. Beyer/President
L.A.B. Validation Corp.
14 West Point Drive
East Northport, NY 11731

Phone (516) 523-7891 email LABValidation@aol.com

157-189 West Merrick Road, Freeport, New York; March 2022
Data Validation Report: Volatile Organics by EPA Method TO15

Table of Contents:

Introduction:

A validation was performed on soil vapor and ambient air samples for Volatile Organic analysis collected by Tyll Engineering and submitted to Alpha Analytical for subsequent analysis under chain of custody documentation. This report contains the laboratory and validation results for the field samples itemized below. The samples were collected on March 23, 2022.

The samples were analyzed by Alpha Analytical utilizing EPA Method TO-15 and in accordance with NYSDEC Analytical Services Protocol (2005) and submitted under NYSDEC ASP Category B equivalent deliverable requirements for the associated analytical methodology employed. The analytical testing consisted of the TO-15 Compound List. Ambient Air samples were also analyzed by Selective Ion Monitoring (SIM) techniques for select chlorinated compounds to achieve NYSDOH Guidance Value reporting levels.

The data was evaluated in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (Publication 9240.1-05), EPA SOP #HW31 (Revision 6-Updated September 2016) and in conjunction with the analytical methodology for which the samples were analyzed, where applicable and relevant.

The data validation report pertains to the following air samples:

Sample Identification	Laboratory Identification	Sample Matrix (Air Type)	Collection Date
181A SSV	L2215158-01	Soil Vapor	03/23/2022
181A IA	L2215158-02	Ambient Air	03/23/2022
OA	L2215158-03	Ambient Air	03/23/2022
179A IA	L2215158-04	Ambient Air	03/23/2022
179A SSV	L2215158-05	Soil Vapor	03/23/2022

Data Qualifier Definitions:

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.

J - The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ - The result is an estimated quantity, but the result may be biased high.

J- - The result is an estimated quantity, but the result may be biased low.

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was analyzed for but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R - The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

D - Analyte concentration was obtained from diluted analysis.

Sample Receipt:
The Chain of Custody document indicates that the air samples were received on the same day following completion of the sampling event via laboratory courier. Sample login notes and the chain of custody indicate that at the Validated Time of Sample Receipt (VTSR) at the laboratory no discrepancies were notated and therefore the integrity of the summa canister samples is assumed to be good.

Summa Canisters were leak tested prior to collection of each sample. Initial pressure gauge is recorded on the chain of custody and is required to be approximately 30 psi with zero air. Acceptable canister pressure was observed for these samples. All canisters pass the leak check requirements.

The data summary Form I's included in Appendix C includes all usable (qualified) and unusable (rejected) results for the samples identified above and summarize the detailed narrative section of the report. Data validation qualifications have been reported on the Form I's for ease of review and verification.

NOTE:
L.A.B. Validation Corp. believes it is appropriate to note that the data validation criteria utilized for data evaluation is different than the method requirements utilized by the laboratory. Qualified data does not necessarily mean that the laboratory was non-compliant in the analysis that was performed.

1.0 Volatile Organics by EPA Compendium Method TO-15

The following method criteria were reviewed: holding times, surrogate standards, LCS, Blanks, Laboratory Duplicate, Tunes, Calibrations, Internal Standards, Target Component Identification and Quantitation, Reported Quantitation Limits and Overall System Performance. The volatile results are valid and useable as noted on the data summary table in Appendix C and within the following text:

1.1 Holding Time
The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the technical holding time is exceeded, the data may not be considered valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimates, "J." The non-detects (sample quantitation limits) are required to be flagged as estimated, "J," or unusable, "R," if the holding times are grossly exceeded.

Samples were analyzed within the method and technical required holding times of thirty (30) days from sample collection for analysis. No qualifications were required based upon holding time criteria.

1.2 Surrogate Standards
All samples are spiked with surrogate compounds prior to sample analysis to evaluate overall laboratory performance and efficiency of the analytical technique. If the measure of surrogate concentrations is outside contract
specifications, qualifications are required to be applied to associated samples and analytes.

Samples were not spiked with surrogate standards. Method TO15 does not mandate the addition of surrogate standards.

1.3 Matrix Spikes (MS)/ Matrix Spike Duplicates (MSD)/Laboratory Duplicate /Field Duplicate Analysis

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices.

Matrix Spike/Matrix Spike Duplicate analysis was not performed on samples pertaining to this SDG. Laboratory duplicate was performed on 179A SSV. Precision is acceptable and all detected analytes are below laboratory criteria of 25%. No qualifications are required based on laboratory duplicate analysis.

Field Duplicate analysis was not required for this sampling event. When performed, acceptable precision for air samples is 25%. The following criteria are utilized for Field/Lab Duplicate analysis when performed:

Criteria	Detected Compounds	Non-Detected Compounds
The RPD is within the limits of 0 and 25%	No qualification	No qualification
The RPD >25%	J in the parent and duplicate samples	Not applicable
The RPD could not be calculated since the compound was only detected in either the parent of duplicate sample. However, the detected concentration was </=2x the reporting limit	No qualification	No qualification
The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample However, the detected concentration was >2x the reporting limit.	J in the parent and duplicate sample	UJ in the parent of duplicate sample

No qualifications to the data were applied based on MS/MSD/Laboratory Duplicate or Field Duplicate analysis.

1.4 Laboratory Control Sample

The LCS data for laboratory control samples (LCS) are generated to provide information on the accuracy of the analytical method and on the laboratory performance.
The following table summarizes the LCS criteria and the data qualification guidelines for all associated field samples.

LCS	NOT QUALIFIED	J	R
% Recovery:			
Detects	70-130%	<70%, >130%	
Non-Detects	>/=130%	50-69%	<50%
Absolute RT of LCS Compounds:			
LCS Compounds in samples RT: (min)	+/-0 .33		>/=0.33

Acceptable LCS was analyzed pertaining to this sampling event. Recovery values for all spiked compounds was determined to be >70%-<130% for all analytes.

1.5 Blank Contamination

Quality assurance (QA) blanks, i.e., method, trip and field blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross-contamination of samples during field operations. Storage blanks measure cross-contamination during sample storage of the field samples and are not required for TO15 analysis. Canister blanks measure cross-contamination from the sampling media.

The following table was utilized to qualify target analyte results due to method blank contamination. The largest value from all the associated blanks is required to be utilized. The largest value from all the associated blanks is required to be utilized:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, field, Trip, Instrument	Detects	Not Detected	No qualification required
	<CRQL*	<CRQL*	Report CRQL value with a U
		>/= CRQL* and <2x the CRQL**	No qualification required
	>CRQL*	</= CRQL*	Report CRQL value with a U
		>/=CRQL* and </= blank concentration	Report blank value for sample concentration with a U
		>/= CRQL* and > blank concentration	No qualification required
	=CRQL*	</= CRQL*	Report CRQL value with a U
		>CRQL*	No qualification required
	Gross Contamination**	Detects	Report blank value for sample concentration with a U

*2x the CRQL for methylene chloride, 2-butanone, and acetone.
**4x the CRQL for methylene chloride, 2-butanone, and acetone
***Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 ug/L.
Below is a summary of the compounds in the sample and the associated qualifications that have been applied:
The table below is utilized to qualify samples with target compound results also present in certification blanks:

Certification Contamination	Sample Result	Action for Sample
>/=detect limit	>5x certification contamination	No qualification required
>/=detect limit	<detect limit	Detection limit "U"
>/=detect limit	>/=detect limit and </= 5x certification contamination level	5x certification contamination "U"
<detect limit	</=detection limit and >/= detection limit	No qualification

Below is a summary of the compounds in the sample and the associated qualifications that have been applied:

A) **Method Blank Contamination:**
Method and Canister blanks were determined to be free of any contamination.

Acetone and 2-Butanone are common laboratory contaminants. The end user should proceed with caution when making decisions based on the reported concentrations for these compounds since acetone is a solvent utilized in the organic extraction laboratory and could not be negated due to lack of presence in the corresponding blank.

B) **Field Blank Contamination:**
Field Blank analysis was not required.

C) **Trip Blank Contamination:**
Trip Blank analysis was not required.

1.6 GC/MS Instrument Performance Check
Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The Tuning standard for volatile organics is Bromofluorobenzene (BFB).

Instrument performance was generated within acceptable limits and frequency (24 hours) for Bromofluorobenzene (BFB) for all analyses.

1.7 Initial and Continuing Calibrations
Satisfactory instrument calibration is established to ensure that the instrument can produce acceptable quantitative data. An initial calibration demonstrates that the instrument can give acceptable performance at the beginning of an experimental sequence.
The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:
The response factor measures the instrument's response to specific chemical compounds. The response factor for all compounds must be >/= 0.05 in both initial and continuing calibrations. A value <0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J." All non-detects for that compound in the corresponding samples will be rejected, "R."

The following compounds can be >0.01 without qualification:
2-Butanone
Carbon Disulfide
Chloroethane
Chloromethane
1,2-Dibromoethane
1,2-Dichloropropane
1,4-Dioxane
1,2-Dibromo-3-chloropropane
Methylene Chloride

Response factors for the target analytes reported were found to be within acceptable limits (>/=0.05) [or >/=0.01 for the 9 compounds above] and remaining analytes, for the initial and continuing calibrations.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):
Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentrations. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <30%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ." If %RSD and %D grossly exceed QC criteria (>90%), non-detect data may be qualified, "R", unusable. Additionally, in cases where the %RSD is >30% and eliminating either the high or the low point of the curve does not restore the %RSD to less than or equal to 30% then positive results are qualified, "J". In cases where removal of either the low or high point restores the linearity, then only low or high-level results will be qualified, "J" in the portion of the curve where non-linearity exists. Acceptable ICV was analyzed.

Initial Calibrations: The initial calibrations provided and the %RSD was within acceptable limits (30%) and (40%) for poor responders for all requested target compounds. Initial calibration verification standard met QC requirements (<30%).

Continuing Calibrations: The continuing calibrations provided and the %D was within acceptable limits (30%) and (40%) for poor responders for all reported compounds.

1.8 Internal Standards

Internal Standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-40% to +40%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than +/-20 seconds from the associated continuing calibration standard. If the area count is outside the (-40% to +40%) range of the associated standard, all positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 20 seconds, professional judgment will be used to determine either partial or total rejection of the data for that sample fraction.

Internal Standard area responses met QC requirements for all analysis pertaining to this data set as compared to the continuing calibration.

1.9 Target Compound List Identification

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within =/- 0.06RRT units of the standard compound and have an ion spectrum which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound.

GC/MS spectra met the qualitative criteria for identification. Retention times were within required specifications.

1.10 Tentatively Identified Compounds (TICs)

TICs were not required for this project. When submitted, the identification must be considered tentative (both quantitative and qualitative) due to the lack of required compound specific response factors. Consequently, all concentrations should be considered estimated, "J" and because of the qualitative uncertainty should be qualified, "N" where an identification has been made.

TICs were not required with this data set. Sample chromatograms for 181A IA and 179A IA demonstrate late-eluting non-target presence.

1.11 Compound Quantification and Reported Detection Limits

GC/MS quantitative analysis are acceptable. Correct internal standards and response factors and air volumes were used to calculate final concentrations.

Sample results have been presented in ug/m3 as well as ppbv on the laboratory reporting forms. Ambient samples were initially analyzed undiluted at 250mls. 179A IA yielded Ethanol concentration above the high calibration limit. This sample was reanalyzed at 100mls (1:2.5 dilution). Initial results, qualified, "E" by the laboratory have been rejected, and the diluted value, qualified, "D" during the review to assist the end user to make decisions based on the diluted concentration within calibration range (1,180 ug/m3).

Ambient samples were also analyzed by SIM techniques (Selective Ion Monitoring) for select chlorinated compounds to achieve required NYSDOH action levels.

181A SSV was analyzed at a 1:10 dilution. Reporting limits have been adjusted accordingly. Analysis is acceptable. Tetrachloroethene concentration is within the linear range of the instrument.

1.12 Overall System Performance

GC/MS analytical methodology was acceptable for this analysis. The data reported agrees with the raw data provided in the final report. The laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package.

Reviewer's Signature Lou A. Bly **Date** 04/24/2022

Appendix A
Chain of Custody Document
And Sample Receipt Checklist

AIR ANALYSIS

ALPHA ANALYTICAL

CHAIN OF CUSTODY

PAGE 1 OF 1

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/24/22

ALPHA Job #: L2215158

Client Information

Client: Tyll Engineering and Consulting

Address: 169 Commack Rd, Suite H173
Commack NY 11725

Phone: 631 664 6477

Fax:

Email: Karen@tyllengineering.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Elks Plaza

Project Location: 157-189 West Merrick Rd Freeport

Project #:

Project Manager: Karen Tyll

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX

☒ ADEx

Criteria Checker:

(Default based on Regulatory Criteria Indicated)

Other Formats: excell

☒ EMAIL (standard pdf report)

☒ Additional Deliverables: Cat B

Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
15158-01	181A SSV	3/23/22	0735	1535	-30.63	-9.04	SV	KT	2.7L	346	0774		X				
02	181A IA	3/23/22	0736	1537	-30.44	-13.03	AA	KT	2.7L	529	01604		X				
03	OA	3/23/22	0742	15.43	-29.68	-5.04	AA	KT	2.7L	3415	01768		X				
04	179A SSV	3/23/22	0750	1551	-30.52	-13.51	SV	KT	2.7L	539	01791		X				
05	179A IA	3/23/22	0758	1503	-30.75	-7.0	AA	KT	2.7L	497	01553		X				

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
Karen Tyll	3/23/22 1640	[signature]	3/23/22 16:40
[signature]	3/23/22 1830	Anthony Green	3/23/22 2000
Anthony Green	3/23/22	[signature] AAL 3/24/22 0045	
[signature] AAL 3/24/22 0530		[signature]	3/24/22 [illegible]

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 Rev: (25-Sep-15)

Sample Delivery Group Summary

Alpha Job Number : L2215158

Account Name : Tyll Engineering and Consulting PC
Project Number :
Project Name : ELKS PLAZA

Received : 23-MAR-2022
Reviewer : Jennifer Jerome

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
NA	Absent/			

Condition Information

1) All samples on COC received?	YES
2) Extra samples received?	NO
3) Are there any sample container discrepancies?	NO
4) Are there any discrepancies between sample labels & COC?	NO
5) Are samples in appropriate containers for requested analysis?	YES
6) Are samples properly preserved for requested analysis?	YES
7) Are samples within holding time for requested analysis?	YES
8) All sampling equipment returned?	YES

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	NA

Appendix B
Case Narrative

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Case Narrative (continued)

Report Revision

April 19, 2022 the report has been amended to correct the sample designations for L2215158-04 and L2215158-05. The canisters were mislabeled in the field. A revised COC was not provided.

Volatile Organics in Air

Canisters were released from the laboratory on March 23, 2022. The canister certification results are provided as an addendum.

L2215158-01D and -05D: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

L2215158-05: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J Anderson Report Date: 04/19/22

Title: Technical Director/Representative

Appendix C
Data Summary Form I's
With Qualifications

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-01D	Date Collected	: 03/23/22 15:35
Client ID	: 181A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 06:47
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 10
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321547	Instrument ID	: AIRPIANO3
Sample Amount	: 25.0 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-71-8	Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--	U
74-87-3	Chloromethane	ND	2.00	--	ND	4.13	--	U
76-14-2	Freon-114	ND	2.00	--	ND	14.0	--	U
75-01-4	Vinyl chloride	ND	2.00	--	ND	5.11	--	U
106-99-0	1,3-Butadiene	ND	2.00	--	ND	4.42	--	U
74-83-9	Bromomethane	ND	2.00	--	ND	7.77	--	U
75-00-3	Chloroethane	ND	2.00	--	ND	5.28	--	U
64-17-5	Ethanol	ND	50.0	--	ND	94.2	--	U
593-60-2	Vinyl bromide	ND	2.00	--	ND	8.74	--	U
67-64-1	Acetone	ND	10.0	--	ND	23.8	--	U
75-69-4	Trichlorofluoromethane	ND	2.00	--	ND	11.2	--	U
67-63-0	Isopropanol	ND	5.00	--	ND	12.3	--	U
75-35-4	1,1-Dichloroethene	ND	2.00	--	ND	7.93	--	U
75-65-0	Tertiary butyl Alcohol	ND	5.00	--	ND	15.2	--	U
75-09-2	Methylene chloride	ND	5.00	--	ND	17.4	--	U
107-05-1	3-Chloropropene	ND	2.00	--	ND	6.26	--	U
75-15-0	Carbon disulfide	ND	2.00	--	ND	6.23	--	U
76-13-1	Freon-113	ND	2.00	--	ND	15.3	--	U
156-60-5	trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--	U
75-34-3	1,1-Dichloroethane	ND	2.00	--	ND	8.09	--	U
1634-04-4	Methyl tert butyl ether	ND	2.00	--	ND	7.21	--	U
78-93-3	2-Butanone	ND	5.00	--	ND	14.7	--	U
156-59-2	cis-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--	U
141-78-6	Ethyl Acetate	ND	5.00	--	ND	18.0	--	U
67-66-3	Chloroform	ND	2.00	--	ND	9.77	--	U
109-99-9	Tetrahydrofuran	ND	5.00	--	ND	14.7	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-01D	Date Collected	: 03/23/22 15:35
Client ID	: 181A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 06:47
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 10
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321547	Instrument ID	: AIRPIANO3
Sample Amount	: 25.0 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
107-06-2	1,2-Dichloroethane	ND	2.00	--	ND	8.09	--	U
110-54-3	n-Hexane	ND	2.00	--	ND	7.05	--	U
71-55-6	1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--	U
71-43-2	Benzene	ND	2.00	--	ND	6.39	--	U
56-23-5	Carbon tetrachloride	ND	2.00	--	ND	12.6	--	U
110-82-7	Cyclohexane	ND	2.00	--	ND	6.88	--	U
78-87-5	1,2-Dichloropropane	ND	2.00	--	ND	9.24	--	U
75-27-4	Bromodichloromethane	ND	2.00	--	ND	13.4	--	U
123-91-1	1,4-Dioxane	ND	2.00	--	ND	7.21	--	U
79-01-6	Trichloroethene	ND	2.00	--	ND	10.7	--	U
540-84-1	2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--	U
142-82-5	Heptane	ND	2.00	--	ND	8.20	--	U
10061-01-5	cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--	U
108-10-1	4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--	U
10061-02-6	trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--	U
79-00-5	1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--	U
108-88-3	Toluene	5.13	2.00	--	19.3	7.54	--	
591-78-6	2-Hexanone	ND	2.00	--	ND	8.20	--	U
124-48-1	Dibromochloromethane	ND	2.00	--	ND	17.0	--	U
106-93-4	1,2-Dibromoethane	ND	2.00	--	ND	15.4	--	U
127-18-4	Tetrachloroethene	586	2.00	--	3970	13.6	--	
108-90-7	Chlorobenzene	ND	2.00	--	ND	9.21	--	U
100-41-4	Ethylbenzene	4.81	2.00	--	20.9	8.69	--	
179601-23-1	p/m-Xylene	ND	4.00	--	ND	17.4	--	U
75-25-2	Bromoform	ND	2.00	--	ND	20.7	--	U
100-42-5	Styrene	ND	2.00	--	ND	8.52	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-01D	Date Collected	: 03/23/22 15:35
Client ID	: 181A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 06:47
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 10
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321547	Instrument ID	: AIRPIANO3
Sample Amount	: 25.0 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--	U
95-47-6	o-Xylene	ND	2.00	--	ND	8.69	--	U
622-96-8	4-Ethyltoluene	ND	2.00	--	ND	9.83	--	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	--	ND	9.83	--	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--	U
100-44-7	Benzyl chloride	ND	2.00	--	ND	10.4	--	U
541-73-1	1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--	U
106-46-7	1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--	U
95-50-1	1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--	U
87-68-3	Hexachlorobutadiene	ND	2.00	--	ND	21.3	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-02	Date Collected	: 03/23/22 15:37
Client ID	: 181A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 00:33
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321538	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-71-8	Dichlorodifluoromethane	0.537	0.200	--	2.66	0.989	--	
74-87-3	Chloromethane	1.10	0.200	--	2.27	0.413	--	
76-14-2	Freon-114	ND	0.200	--	ND	1.40	--	U
106-99-0	1,3-Butadiene	ND	0.200	--	ND	0.442	--	U
74-83-9	Bromomethane	ND	0.200	--	ND	0.777	--	U
75-00-3	Chloroethane	ND	0.200	--	ND	0.528	--	U
64-17-5	Ethanol	440	5.00	--	829	9.42	--	
593-60-2	Vinyl bromide	ND	0.200	--	ND	0.874	--	U
67-64-1	Acetone	85.6	1.00	--	203	2.38	--	
75-69-4	Trichlorofluoromethane	0.376	0.200	--	2.11	1.12	--	
67-63-0	Isopropanol	29.5	0.500	--	72.5	1.23	--	
75-65-0	Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--	U
75-09-2	Methylene chloride	ND	0.500	--	ND	1.74	--	U
107-05-1	3-Chloropropene	ND	0.200	--	ND	0.626	--	U
75-15-0	Carbon disulfide	ND	0.200	--	ND	0.623	--	U
76-13-1	Freon-113	ND	0.200	--	ND	1.53	--	U
156-60-5	trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--	U
75-34-3	1,1-Dichloroethane	ND	0.200	--	ND	0.809	--	U
1634-04-4	Methyl tert butyl ether	ND	0.200	--	ND	0.721	--	U
78-93-3	2-Butanone	0.913	0.500	--	2.69	1.47	--	
141-78-6	Ethyl Acetate	2.79	0.500	--	10.1	1.80	--	
67-66-3	Chloroform	1.46	0.200	--	7.13	0.977	--	
109-99-9	Tetrahydrofuran	ND	0.500	--	ND	1.47	--	U
107-06-2	1,2-Dichloroethane	ND	0.200	--	ND	0.809	--	U
110-54-3	n-Hexane	0.321	0.200	--	1.13	0.705	--	
71-43-2	Benzene	0.438	0.200	--	1.40	0.639	--	

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-02	Date Collected	: 03/23/22 15:37
Client ID	: 181A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 00:33
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321538	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
110-82-7	Cyclohexane	ND	0.200	--	ND	0.688	--	U
78-87-5	1,2-Dichloropropane	ND	0.200	--	ND	0.924	--	U
75-27-4	Bromodichloromethane	ND	0.200	--	ND	1.34	--	U
123-91-1	1,4-Dioxane	ND	0.200	--	ND	0.721	--	U
540-84-1	2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--	U
142-82-5	Heptane	ND	0.200	--	ND	0.820	--	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
108-10-1	4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
79-00-5	1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--	U
108-88-3	Toluene	0.858	0.200	--	3.23	0.754	--	
591-78-6	2-Hexanone	ND	0.200	--	ND	0.820	--	U
124-48-1	Dibromochloromethane	ND	0.200	--	ND	1.70	--	U
106-93-4	1,2-Dibromoethane	ND	0.200	--	ND	1.54	--	U
108-90-7	Chlorobenzene	ND	0.200	--	ND	0.921	--	U
100-41-4	Ethylbenzene	ND	0.200	--	ND	0.869	--	U
179601-23-1	p/m-Xylene	ND	0.400	--	ND	1.74	--	U
75-25-2	Bromoform	ND	0.200	--	ND	2.07	--	U
100-42-5	Styrene	ND	0.200	--	ND	0.852	--	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--	U
95-47-6	o-Xylene	ND	0.200	--	ND	0.869	--	U
622-96-8	4-Ethyltoluene	ND	0.200	--	ND	0.983	--	U
108-67-8	1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
95-63-6	1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
100-44-7	Benzyl chloride	ND	0.200	--	ND	1.04	--	U
541-73-1	1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-02	Date Collected	: 03/23/22 15:37
Client ID	: 181A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 00:33
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321538	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
106-46-7	1,4-Dichlorobenzene	0.342	0.200	--	2.06	1.20	--	
95-50-1	1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
120-82-1	1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--	U
87-68-3	Hexachlorobutadiene	ND	0.200	--	ND	2.13	--	U

Results Summary
Form 1
Volatile Organics in Air by SIM

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-02	Date Collected	: 03/23/22 15:37
Client ID	: 181A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 00:33
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15-SIM	Analyst	: TS
Lab File ID	: R321538_EV2	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-01-4	Vinyl chloride	ND	0.020	--	ND	0.051	--	U
75-35-4	1,1-Dichloroethene	ND	0.020	--	ND	0.079	--	U
156-59-2	cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--	U
71-55-6	1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--	U
56-23-5	Carbon tetrachloride	0.237	0.020	--	1.49	0.126	--	
79-01-6	Trichloroethene	ND	0.020	--	ND	0.107	--	U
127-18-4	Tetrachloroethene	0.150	0.020	--	1.02	0.136	--	

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-03	Date Collected	: 03/23/22 15:43
Client ID	: OA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/05/22 18:16
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321529	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-71-8	Dichlorodifluoromethane	0.539	0.200	--	2.67	0.989	--	
74-87-3	Chloromethane	0.586	0.200	--	1.21	0.413	--	
76-14-2	Freon-114	ND	0.200	--	ND	1.40	--	U
106-99-0	1,3-Butadiene	ND	0.200	--	ND	0.442	--	U
74-83-9	Bromomethane	ND	0.200	--	ND	0.777	--	U
75-00-3	Chloroethane	ND	0.200	--	ND	0.528	--	U
64-17-5	Ethanol	5.44	5.00	--	10.3	9.42	--	
593-60-2	Vinyl bromide	ND	0.200	--	ND	0.874	--	U
67-64-1	Acetone	4.19	1.00	--	9.95	2.38	--	
75-69-4	Trichlorofluoromethane	0.204	0.200	--	1.15	1.12	--	
67-63-0	Isopropanol	0.534	0.500	--	1.31	1.23	--	
75-65-0	Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--	U
75-09-2	Methylene chloride	ND	0.500	--	ND	1.74	--	U
107-05-1	3-Chloropropene	ND	0.200	--	ND	0.626	--	U
75-15-0	Carbon disulfide	ND	0.200	--	ND	0.623	--	U
76-13-1	Freon-113	ND	0.200	--	ND	1.53	--	U
156-60-5	trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--	U
75-34-3	1,1-Dichloroethane	ND	0.200	--	ND	0.809	--	U
1634-04-4	Methyl tert butyl ether	ND	0.200	--	ND	0.721	--	U
78-93-3	2-Butanone	ND	0.500	--	ND	1.47	--	U
141-78-6	Ethyl Acetate	ND	0.500	--	ND	1.80	--	U
67-66-3	Chloroform	ND	0.200	--	ND	0.977	--	U
109-99-9	Tetrahydrofuran	ND	0.500	--	ND	1.47	--	U
107-06-2	1,2-Dichloroethane	ND	0.200	--	ND	0.809	--	U
110-54-3	n-Hexane	ND	0.200	--	ND	0.705	--	U
71-43-2	Benzene	0.204	0.200	--	0.652	0.639	--	

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-03	Date Collected	: 03/23/22 15:43
Client ID	: OA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/05/22 18:16
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321529	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
110-82-7	Cyclohexane	ND	0.200	--	ND	0.688	--	U
78-87-5	1,2-Dichloropropane	ND	0.200	--	ND	0.924	--	U
75-27-4	Bromodichloromethane	ND	0.200	--	ND	1.34	--	U
123-91-1	1,4-Dioxane	ND	0.200	--	ND	0.721	--	U
540-84-1	2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--	U
142-82-5	Heptane	ND	0.200	--	ND	0.820	--	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
108-10-1	4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
79-00-5	1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--	U
108-88-3	Toluene	ND	0.200	--	ND	0.754	--	U
591-78-6	2-Hexanone	ND	0.200	--	ND	0.820	--	U
124-48-1	Dibromochloromethane	ND	0.200	--	ND	1.70	--	U
106-93-4	1,2-Dibromoethane	ND	0.200	--	ND	1.54	--	U
108-90-7	Chlorobenzene	ND	0.200	--	ND	0.921	--	U
100-41-4	Ethylbenzene	ND	0.200	--	ND	0.869	--	U
179601-23-1	p/m-Xylene	ND	0.400	--	ND	1.74	--	U
75-25-2	Bromoform	ND	0.200	--	ND	2.07	--	U
100-42-5	Styrene	ND	0.200	--	ND	0.852	--	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--	U
95-47-6	o-Xylene	ND	0.200	--	ND	0.869	--	U
622-96-8	4-Ethyltoluene	ND	0.200	--	ND	0.983	--	U
108-67-8	1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
95-63-6	1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
100-44-7	Benzyl chloride	ND	0.200	--	ND	1.04	--	U
541-73-1	1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-03	Date Collected	: 03/23/22 15:43
Client ID	: OA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/05/22 18:16
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321529	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
106-46-7	1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
95-50-1	1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
120-82-1	1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--	U
87-68-3	Hexachlorobutadiene	ND	0.200	--	ND	2.13	--	U

Results Summary
Form 1
Volatile Organics in Air by SIM

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-03	Date Collected	: 03/23/22 15:43
Client ID	: OA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/05/22 18:16
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15-SIM	Analyst	: TS
Lab File ID	: R321529_EV2	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-01-4	Vinyl chloride	ND	0.020	--	ND	0.051	--	U
75-35-4	1,1-Dichloroethene	ND	0.020	--	ND	0.079	--	U
156-59-2	cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--	U
71-55-6	1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--	U
56-23-5	Carbon tetrachloride	0.086	0.020	--	0.541	0.126	--	
79-01-6	Trichloroethene	ND	0.020	--	ND	0.107	--	U
127-18-4	Tetrachloroethene	0.644	0.020	--	4.37	0.136	--	

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-04	Date Collected	: 03/23/22 15:51
Client ID	: 179A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 07:27
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321548	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-71-8	Dichlorodifluoromethane	0.535	0.200	--	2.65	0.989	--	
74-87-3	Chloromethane	1.43	0.200	--	2.95	0.413	--	
76-14-2	Freon-114	ND	0.200	--	ND	1.40	--	U
106-99-0	1,3-Butadiene	ND	0.200	--	ND	0.442	--	U
74-83-9	Bromomethane	ND	0.200	--	ND	0.777	--	U
75-00-3	Chloroethane	ND	0.200	--	ND	0.528	--	U
64-17-5	Ethanol	544	5.00	--	1030	9.42	--	~~E~~ R
593-60-2	Vinyl bromide	ND	0.200	--	ND	0.874	--	U
67-64-1	Acetone	43.4	1.00	--	103	2.38	--	
75-69-4	Trichlorofluoromethane	0.396	0.200	--	2.23	1.12	--	
67-63-0	Isopropanol	19.4	0.500	--	47.7	1.23	--	
75-65-0	Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--	U
75-09-2	Methylene chloride	ND	0.500	--	ND	1.74	--	U
107-05-1	3-Chloropropene	ND	0.200	--	ND	0.626	--	U
75-15-0	Carbon disulfide	0.214	0.200	--	0.666	0.623	--	
76-13-1	Freon-113	ND	0.200	--	ND	1.53	--	U
156-60-5	trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--	U
75-34-3	1,1-Dichloroethane	ND	0.200	--	ND	0.809	--	U
1634-04-4	Methyl tert butyl ether	ND	0.200	--	ND	0.721	--	U
78-93-3	2-Butanone	ND	0.500	--	ND	1.47	--	U
141-78-6	Ethyl Acetate	1.80	0.500	--	6.49	1.80	--	
67-66-3	Chloroform	1.21	0.200	--	5.91	0.977	--	
109-99-9	Tetrahydrofuran	ND	0.500	--	ND	1.47	--	U
107-06-2	1,2-Dichloroethane	ND	0.200	--	ND	0.809	--	U
110-54-3	n-Hexane	0.273	0.200	--	0.962	0.705	--	
71-43-2	Benzene	0.385	0.200	--	1.23	0.639	--	

for 4/12/22

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-04	Date Collected	: 03/23/22 15:51
Client ID	: 179A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 07:27
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321548	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
110-82-7	Cyclohexane	ND	0.200	--	ND	0.688	--	U
78-87-5	1,2-Dichloropropane	ND	0.200	--	ND	0.924	--	U
75-27-4	Bromodichloromethane	ND	0.200	--	ND	1.34	--	U
123-91-1	1,4-Dioxane	ND	0.200	--	ND	0.721	--	U
540-84-1	2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--	U
142-82-5	Heptane	ND	0.200	--	ND	0.820	--	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
108-10-1	4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
79-00-5	1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--	U
108-88-3	Toluene	0.648	0.200	--	2.44	0.754	--	
591-78-6	2-Hexanone	ND	0.200	--	ND	0.820	--	U
124-48-1	Dibromochloromethane	ND	0.200	--	ND	1.70	--	U
106-93-4	1,2-Dibromoethane	ND	0.200	--	ND	1.54	--	U
108-90-7	Chlorobenzene	ND	0.200	--	ND	0.921	--	U
100-41-4	Ethylbenzene	ND	0.200	--	ND	0.869	--	U
179601-23-1	p/m-Xylene	ND	0.400	--	ND	1.74	--	U
75-25-2	Bromoform	ND	0.200	--	ND	2.07	--	U
100-42-5	Styrene	ND	0.200	--	ND	0.852	--	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--	U
95-47-6	o-Xylene	ND	0.200	--	ND	0.869	--	U
622-96-8	4-Ethyltoluene	ND	0.200	--	ND	0.983	--	U
108-67-8	1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
95-63-6	1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
100-44-7	Benzyl chloride	ND	0.200	--	ND	1.04	--	U
541-73-1	1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyli Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-04	Date Collected	: 03/23/22 15:51
Client ID	: 179A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 07:27
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321548	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
106-46-7	1,4-Dichlorobenzene	0.325	0.200	--	1.95	1.20	--	
95-50-1	1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
120-82-1	1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--	U
87-68-3	Hexachlorobutadiene	ND	0.200	--	ND	2.13	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-04D	Date Collected	: 03/23/22 15:51
Client ID	: 179A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 09:57
Sample Matrix	: AIR	Dilution Factor	: 2.5
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321551	Instrument ID	: AIRPIANO3
Sample Amount	: 100 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
64-17-5	Ethanol	624	12.5	--	1180	23.6	--	D

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Results Summary
Form 1
Volatile Organics in Air by SIM

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-04	Date Collected	: 03/23/22 15:51
Client ID	: 179A IA	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 07:27
Sample Matrix	: AIR	Dilution Factor	: 1
Analytical Method	: 48,TO-15-SIM	Analyst	: RY
Lab File ID	: R321548_EV2	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-01-4	Vinyl chloride	ND	0.020	--	ND	0.051	--	U
75-35-4	1,1-Dichloroethene	ND	0.020	--	ND	0.079	--	U
156-59-2	cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--	U
71-55-6	1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--	U
56-23-5	Carbon tetrachloride	0.157	0.020	--	0.988	0.126	--	
79-01-6	Trichloroethene	0.045	0.020	--	0.242	0.107	--	
127-18-4	Tetrachloroethene	0.220	0.020	--	1.49	0.136	--	
540-59-0	1,2-Dichloroethene (total)	ND	0.020	--	ND	0.079	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-05	Date Collected	: 03/23/22 15:03
Client ID	: 179A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 01:17
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321539	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
75-71-8	Dichlorodifluoromethane	0.535	0.200	--	2.65	0.989	--	
74-87-3	Chloromethane	0.676	0.200	--	1.40	0.413	--	
76-14-2	Freon-114	ND	0.200	--	ND	1.40	--	U
75-01-4	Vinyl chloride	ND	0.200	--	ND	0.511	--	U
106-99-0	1,3-Butadiene	ND	0.200	--	ND	0.442	--	U
74-83-9	Bromomethane	ND	0.200	--	ND	0.777	--	U
75-00-3	Chloroethane	ND	0.200	--	ND	0.528	--	U
64-17-5	Ethanol	63.3	5.00	--	119	9.42	--	
593-60-2	Vinyl bromide	ND	0.200	--	ND	0.874	--	U
67-64-1	Acetone	7.42	1.00	--	17.6	2.38	--	
75-69-4	Trichlorofluoromethane	0.670	0.200	--	3.77	1.12	--	
67-63-0	Isopropanol	3.45	0.500	--	8.48	1.23	--	
75-35-4	1,1-Dichloroethene	ND	0.200	--	ND	0.793	--	U
75-65-0	Tertiary butyl Alcohol	1.18	0.500	--	3.58	1.52	--	
75-09-2	Methylene chloride	ND	0.500	--	ND	1.74	--	U
107-05-1	3-Chloropropene	ND	0.200	--	ND	0.626	--	U
75-15-0	Carbon disulfide	ND	0.200	--	ND	0.623	--	U
76-13-1	Freon-113	ND	0.200	--	ND	1.53	--	U
156-60-5	trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--	U
75-34-3	1,1-Dichloroethane	ND	0.200	--	ND	0.809	--	U
1634-04-4	Methyl tert butyl ether	ND	0.200	--	ND	0.721	--	U
78-93-3	2-Butanone	0.631	0.500	--	1.86	1.47	--	
156-59-2	cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--	U
141-78-6	Ethyl Acetate	ND	0.500	--	ND	1.80	--	U
67-66-3	Chloroform	0.751	0.200	--	3.67	0.977	--	
109-99-9	Tetrahydrofuran	ND	0.500	--	ND	1.47	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-05	Date Collected	: 03/23/22 15:03
Client ID	: 179A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 01:17
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321539	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
107-06-2	1,2-Dichloroethane	ND	0.200	--	ND	0.809	--	U
110-54-3	n-Hexane	0.202	0.200	--	0.712	0.705	--	
71-55-6	1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--	U
71-43-2	Benzene	0.216	0.200	--	0.690	0.639	--	
56-23-5	Carbon tetrachloride	ND	0.200	--	ND	1.26	--	U
110-82-7	Cyclohexane	4.27	0.200	--	14.7	0.688	--	
78-87-5	1,2-Dichloropropane	ND	0.200	--	ND	0.924	--	U
75-27-4	Bromodichloromethane	ND	0.200	--	ND	1.34	--	U
123-91-1	1,4-Dioxane	ND	0.200	--	ND	0.721	--	U
79-01-6	Trichloroethene	0.921	0.200	--	4.95	1.07	--	
540-84-1	2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--	U
142-82-5	Heptane	ND	0.200	--	ND	0.820	--	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
108-10-1	4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--	U
79-00-5	1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--	U
108-88-3	Toluene	2.29	0.200	--	8.63	0.754	--	
591-78-6	2-Hexanone	ND	0.200	--	ND	0.820	--	U
124-48-1	Dibromochloromethane	ND	0.200	--	ND	1.70	--	U
106-93-4	1,2-Dibromoethane	ND	0.200	--	ND	1.54	--	U
127-18-4	Tetrachloroethene	64.4	0.200	--	437	1.36	--	
108-90-7	Chlorobenzene	ND	0.200	--	ND	0.921	--	U
100-41-4	Ethylbenzene	0.218	0.200	--	0.947	0.869	--	
179601-23-1	p/m-Xylene	0.517	0.400	--	2.25	1.74	--	
75-25-2	Bromoform	ND	0.200	--	ND	2.07	--	U
100-42-5	Styrene	ND	0.200	--	ND	0.852	--	U

Results Summary
Form 1
Volatile Organics in Air

Client	: Tyll Engineering and Consulting PC	Lab Number	: L2215158
Project Name	: ELKS PLAZA	Project Number	:
Lab ID	: L2215158-05	Date Collected	: 03/23/22 15:03
Client ID	: 179A SSV	Date Received	: 03/23/22
Sample Location	: 157-189 WEST MERRICK RD FREEPORT	Date Analyzed	: 04/06/22 01:17
Sample Matrix	: SOIL_VAPOR	Dilution Factor	: 1
Analytical Method	: 48,TO-15	Analyst	: TS
Lab File ID	: R321539	Instrument ID	: AIRPIANO3
Sample Amount	: 250 ml	GC Column	: RTX-1

		ppbV			ug/m3			
CAS NO.	Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--	U
95-47-6	o-Xylene	ND	0.200	--	ND	0.869	--	U
622-96-8	4-Ethyltoluene	ND	0.200	--	ND	0.983	--	U
108-67-8	1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
95-63-6	1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--	U
100-44-7	Benzyl chloride	ND	0.200	--	ND	1.04	--	U
541-73-1	1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
106-46-7	1,4-Dichlorobenzene	0.263	0.200	--	1.58	1.20	--	
95-50-1	1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--	U
120-82-1	1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--	U
87-68-3	Hexachlorobutadiene	ND	0.200	--	ND	2.13	--	U

Attachment E

Questionnaire and Building Inventory

Photos of Chemicals Observed

and

available SDS for detergents and chemicals

OSR – 3

3/23/22

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Karen Tyll Date/Time Prepared 3/23/22 810 am

Preparer's Affiliation _____ Phone No. _____

Purpose of Investigation _____

1. OCCUPANT:

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: (Y) / N

Last Name: Reisman First Name: Lois

Address: 28 Campbell Lane Commack, NY 11725

County: Suffolk

Home Phone: _____ Office Phone: (516) 383-6893

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Multiple. Food Service, Personal Care Services, Grocery

Does it include residences (i.e., multi-use)? Y (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age_____

Is the building insulated? (Y) N How air tight? Tight (Average) Not Tight

4. AIRFLOW not completed.

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other n/a
c. Basement floor:	concrete	dirt	stone	other n/a
d. Basement floor:	uncovered	covered	covered with n/a	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls: N/A	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is: N/A	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: N/A (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

none observed within laundromat

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other Dryers

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors (Main Floor) Other _____

Air conditioning: (Central Air) Window units Open Windows None

Are there air distribution ducts present? (Y)/ N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

not applicable

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	—
1st Floor	Retail / Commercial
2nd Floor	—
3rd Floor	—
4th Floor	—

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) Please specify ____

d. Has the building ever had a fire? Y / (N) When? ____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where? ____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type? ____

g. Is there smoking in the building? Y / (N) How frequently? ____

h. Have cleaning products been used recently? (Y)/ N When & Type? Laundromat + bldg Maintenance

i. Have cosmetic products been used recently? (Y)/ N When & Type? Hair Salon + Nail Salon adjacent

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? (Y) / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? _____

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? (Y) / N

p. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? (Y) / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? its a laundromat

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service

No
(Unknown)

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? (Active)/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

N/A

First Floor:

See Attached Figure

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

See Figure

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
floor	Aura 10 x 4	55gal	good	Water and surfactant 7732-18-5		
office	gain x 15	25 fl oz	good	See SDS		
office	Chlorox bleach x13	43 fl oz	"	Sodium Hypochlorite		
"	Downy Concentrate x9	12.2 fl oz	"	See SDS		
"	Arm + Hammer fabric softener sheets x8		"	surfactents,		
	Suavital fabric softener sheets x72			See SDS		
	Tide x 37	25 fl oz		See SDS		
	Suavital fabric softener liquid x15	28.7oz				
	Suavital fabric softener liquid x24	15.2 fl oz				
	Ariel Double bags Poder x13	500g				
	Windex x 10	23oz				
	Chlorox x 4	81oz				
	Dreft x 2	46 fl oz				
	OxiClean Arm+Hamer	131oz				
	Fabuloso	210 fl oz				
	Gain	165 fl oz				
	Weiman Stainless Steel polish	17oz x2				
	Downy					
	Aura Bleach	55gal x 2		Sodium Hypochlorite		

Aura Berry Bouquet 55 gal — Surfactants

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Seventh Generation Detergent 1.5 gal see SDS

SAFETY DATA SHEET

Issue date 21 April 2021

FM000017-00.10, FM000017-00.13

This Safety Data Sheet (SDS) is provided to assist with proper use and safe handling of this product. This product may be packaged for professional use or consumer use. Applicable professional use directions are provided on the product label and are included for easy reference in Section 16 of this SDS, and applicable professional use safety information is included on the product label and in this SDS. The U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) does not apply to "consumer products" as defined by the U.S. Consumer Product Safety Act and Federal Hazardous Substances Act, including consumer products used in the workplace under typical duration and frequency of exposure as experienced by consumers when used for the intended purpose. Applicable consumer product use and safety information is provided on the product label and is included for easy reference in Section 16 of this SDS. This SDS is designed to cover both U.S. and Canada. Differences between U.S. and Canadian requirements are noted where applicable.

Section 1: Identification of Product and Company

Product Name	Laundry Detergent - Free & Clear
Synonyms	None
Product Use	Laundry
Restrictions on Use	Follow directions on the product label

Manufacturer Name	Seventh Generation, Inc.
Address	60 Lake Street, Burlington, VT 05401, USA

Emergency Telephone Number	U.S., Canada
Monday -Friday 8 am - 5 pm ET (except holidays)	1-800-211-4279
Outside these hours	1-800-255-3924 (ChemTel)

Section 2: Hazards Identification

Classification	
U.S.	This product is considered hazardous under the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
Canada	This product is considered hazardous under the WHMIS 2015.

Hazard Category	
Eye Damage/Irritation	Category 2B

Signal Word
WARNING

Hazard Statement(s)
H320 Causes eye irritation

Hazard Pictogram(s)
None

Precautionary Statement(s) - General - Consumer Products
If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.

Precautionary Statement(s) - Prevention

Wash hands thoroughly after handling.

Precautionary Statement(s) - Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Precautionary Statement(s) - Storage

None

Precautionary Statement(s) - Disposal

None

Hazards not otherwise identified

None known

Percent ingredients with unknown acute toxicity

0% of the product consists of ingredients of unknown acute oral toxicity. Refer to Section 11.

Section 3: Composition, Information on Ingredients

Regardless of hazard classification, Seventh Generation discloses all intentionally added ingredients and, if applicable incidental ingredients ≥1% on the consumer product label.

Ingredient	Function	CAS Number	Concentration[1]
aqua (water)	diluent	7732-18-5	30% - 100%
laureth-6	cleaning agent	68439-50-9	3% - 10%
sodium lauryl sulfate	cleaning agent	68585-47-7	3% - 10%
sodium citrate	water softener	68-04-2 / 6132-04-3	3% - 10%
sodium chloride	viscosity modifier	7647-14-5	1% - 3%
sodium oleate	anti-foaming agent	143-19-1	1% - 3%
calcium chloride	enzyme stabilizer	10043-52-4	<1%
citric acid	pH adjuster	77-92-9	<1%
protease (subtilisin) (aep)	enzyme soil remover	9014-01-1	<0.1%
amylase (aep)	enzyme soil remover	9000-90-2	<0.1%
mannanase (aep)	enzyme soil remover	37288-54-3	<0.1%
benzisothiazolinone	preservative	2634-33-5	<0.1%
methylisothiazolinone	preservative	2682-20-4	<0.1%

[1] Where ranges are shown, the exact concentration has been withheld as a trade secret.

Section 4: First Aid Measures

Eye Contact	Flush eyes with water immediately after contact. Contact a physician if irritation develops or persists.
Skin Contact	Rinse thoroughly with water. Call a physician if irritation or rash develops or persists.
Ingestion	Drink one glass of water or milk immediately. If prolonged nausea or pain occurs call a doctor.
Inhalation	If irritation occurs, remove to fresh air. If breathing is affected, call a physician.
Notes to Physician	Treat symptomatically.

Most important symptoms and effects	Acute exposure may result in eye irritation. Symptoms of acute exposure may include the following: redness and pain.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	As appropriate for surrounding fire. Use water, dry chemical, carbon dioxide or foam.
Unsuitable Extinguishing Media	Not available.
Specific Hazards arising from the chemical mixture	Not available.
Hazardous Combustion Products	Not available.
Protective Equipment and Precautions for Firefighters	Fire fighters should wear full protective clothing and self contained breathing apparatus as for surrounding fire.

Section 6: Accidental Release Measures

Personal Precautions	
Industrial Setting	Wear appropriate personal protective equipment (refer to Section 8).
Environmental Precautions	Avoid entry into lakes, streams, ponds or public waterways.
Methods for Containment and Cleaning Up	
Industrial Setting	Before attempting clean up, refer to hazard data given. Material may be slippery if spilled and wet. Prevent spill from entering a waterway. Stop spill at source and contain material. Dispose liquid in accordance with all applicable local, state, and federal regulations.
Household Setting	Small spills and leaks may be cleaned up and disposed of in normal household trash or diluted and disposed of via sewer.

Section 7: Handling and Storage

Safe Handling	
Industrial Setting	Wear appropriate personal protective equipment (refer to section 8).
Household Setting	Use as directed on product label.
Safe Storage	KEEP OUT OF REACH OF CHILDREN AND PETS. Store in original container and keep container closed when not in use. Avoid freezing.
Storage Incompatibilities	None known.

Section 8: Exposure Controls, Personal Protection

Exposure Limits	Occupational exposure limits	
Component Information:		
calcium chloride	10043-52-4	Ontario - OEL - 5 mg/m3 TWA
protease (subtilisin) (aep)	9014-01-1	ACGIH - TLV - 0.00006 mg/m3 Ceiling NIOSH - 0.00006 mg/m3 STEL (60 min) CA, CT, HI, MI, MN, NY, TN, WA - OEL/PEL - 0.00006 mg/m3 STEL (60 min) AB, BC, MB, NB, NL, NT, NS, NU, ON, PE, QC, SK, YT - OEL - 0.00006 mg/m3 Ceiling
.	.	.
Engineering Controls	General ventilation.	
Personal Protective Equipment (PPE)		
Industrial Setting		
Respiratory Protection	None required under normal conditions. General ventilation required.	
Eye Protection	Goggles or other protective eye wear may be worn for protection.	

Skin Protection	Gloves may be worn for protection.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Household Setting	No special precautions necessary as long as product is used as directed.

Section 9: Physical and Chemical Properties

Physical State	Liquid.
Color	Light amber
Clarity	Clear
Odor	Unfragranced. Characteristic of the ingredients
Odor Threshold	Not available.

pH	8.5 - 8.9
Melting Point	Not available.
Freezing Point	Not available.
Initial Boiling Point and Boiling Range	Not available.
Flash Point	Not available. Aqueous Solution.
Evaporation Rate	Not available.
Upper Explosive Limit (UEL)	Not applicable.
Lower Explosive Limit (LEL)	Not applicable.
Vapor Pressure (mmHg)	Not available.
Specific Gravity (H2O = 1)	1.042 - 1.066
Relative Density	Not available.
Vapor Density (Air = 1)	Not available.
Solubility in Water	Miscible
Partition Coefficient: n-octanol/water	Not available.
Auto-Ignition Temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
VOC (weight %)	Not available.

Section 10: Stability and Reactivity

Reactivity	Not available.
Chemical Stability	Stable under normal conditions of use and storage.
Possibility of Hazardous Reactions	None known.
Conditions to Avoid	None known.
Incompatible Materials	
Industrial Setting	None known.
Household Setting	In general, cleaning products should not be mixed with other household chemicals, unless specifically provided for in the use directions.
Hazardous Decomposition Products	None known.

Section 11: Toxicological Information

Potential Route(s) of Exposure	Eyes. Skin. Ingestion.	
Effects of Acute Exposure		
Oral Toxicity	LD50 >5000 mg/kg, calculated based on ingredients.	
Dermal Toxicity	Not classified. No known effects based on ingredients.	
Inhalation Toxicity	Not classified. No known effects based on ingredients.	
Component Information[1]:		
aqua (water)	7732-18-5	Not applicable
laureth-6	68439-50-9	LD50 acute oral (rat) 1870 mg/kg
sodium lauryl sulfate	68585-47-7	LD50 acute oral (rat) 1288 mg/kg

sodium citrate	68-04-2 / 6132-04-3	LD50 acute oral (rat) 5400 mg/kg
sodium chloride	7647-14-5	LD50 acute oral (rat) 3000 mg/kg
sodium oleate	143-19-1	LD50 acute oral (rat) >5000 mg/kg
calcium chloride	10043-52-4	LD50 acute oral (rat) >2000 mg/kg
citric acid	77-92-9	LD50 acute oral (rat) 5400 mg/kg
protease (subtilisin) (aep)	9014-01-1	LD50 acute oral (rat) 1800 mg/kg
amylase (aep)	9000-90-2	LD50 acute oral (rat) >7500 mg/kg
mannanase (aep)	37288-54-3	LD50 acute oral (rat) >5000 mg/kg
benzisothiazolinone	2634-33-5	LD50 acute oral (rat) 1020 mg/kg
methylisothiazolinone	2682-20-4	LD50 acute oral (rat) 120 mg/kg
.	.	.
Eye Contact	Mild Irritant, based on in-vitro data.	
Skin Contact	Not classifed for skin irritation, based on ingredients. Possible irritation from prolonged contact with the undiluted product.	
Skin Sensitization	Not classified for skin sensitization, based on ingredients.	
Respiratory Sensitization	Not classified for respiratory sensitization, based on ingredients.	
Carcinogenicity	Not classified - based on ingredients	
NTP	No Ingredients Listed	
IARC	No Ingredients Listed	
OSHA	No Ingredients Listed	
Reproductive Effects	Not classified - based on ingredients	
Mutagenicity	Not classified - based on ingredients	
Specific Target Organ Toxicity - Single Exposure	Not classified - based on ingredients	
Specific Target Organ Toxicity - Repeat Exposure	Not classified - based on ingredients	
Aspiration Toxicity	Not classified - based on ingredients	

[1]LD50 acute oral toxicity (rat) – This is a value provided by the raw material supplier or scientific literature. It is not a value generated by Seventh Generation by testing using rats. Seventh Generation uses alternative, non-animal based methods and scientific literature to determine the safety classification of our products and their ingredients.

Section 12: Ecological Information

Ecotoxicity	Not available.
Persistence and Degradability	This product is biodegradable, based on ingredients.
Bioaccumulative Potential	No known significant effects or critical hazards.
Mobility in Soil	Not available.
Environmental Fate	No adverse effects expected.

Section 13: Disposal Considerations

Product Waste	Any disposal must be in compliance with applicable local, state, provincial and federal laws and regulations.
Industrial Setting	When disposed as waste in its original form, this product is not considered hazardous waste under Federal regulations, however regulations may vary by state or province and may designate it as hazardous waste. Check with your local waste and waste water authorities. We are aware of the following state waste classifications:
California Hazardous Waste Code	561
Connecticut Hazardous Waste Code	CT04
Michigan Liquid Waste Code	029L
Washington Hazardous Waste Code	WT02
Household Setting	Product residues in the bottle may be discarded in trash, or diluted with water and disposed via sewer.

SAFETY DATA SHEET

	When used as directed, the product is septic-safe.
Empty Packaging	Offer empty container for recycling. If recycling is not available, discard in trash. 

Section 14: Transport Information

U.S. DOT	Not regulated.
U.S. States	See U.S. DOT for finished product classification for transport.
Waste	Regulated in some states if the product is disposed of in its original form as waste by commercial users/handlers. Refer to Section 13. for applicable state waste codes.
Canadian TDG (Surface Transport)	Not regulated.
IMDG (Marine Transport)	Not regulated.
IATA (Air Transport)	Not regulated.

Section 15: Regulatory Information

U.S.		
Toxic Substances Control Act (TSCA)	This product complies with the inventory requirements of the U.S. Toxic Substances Control Act (TSCA).	
California Prop 65	This product is not subject to the labeling requirements of California's Proposition 65.	
California Air Resources Board (CARB)	Not applicable.	
Canada		
Domestic Substances List (DSL)	This product complies with the inventory requirements under Canada's Domestic Substances List (DSL).	
Right to Know	Regardless of hazard classification, all intentionally added ingredients and, if applicable incidental ingredients ≥1% are disclosed on the product label. Please refer to Section 3. of this SDS for ingredient listing.	
Component Information:		
.	.	.

Section 16: Other Information

Hazardous Materials Identification System (HMIS) Rating Legend: 4-Severe, 3-Serious, 2-Moderate, 1-Slight, 0-Minimal	HEALTH /	**1**
	FLAMMABILITY	**0**
	PHYSICAL HAZARDS	**0**
	PERSONAL PROTECTION	**A**

National Fire Protection Association (NFPA) Rating	Not determined.

SAFETY DATA SHEET

Consumer Product Label Information
HOW TO USE SORT: Follow garment care label instructions. MEASURE: 1.5 oz / 44 mL for medium loads; 2.2 oz / 65 mL for heavily soiled or larger loads. WASH: Use dispenser for HE washers. For standard washers, start machine, add detergent, then clothes. KEEP OUT OF REACH OF CHILDREN. If product gets into eyes, flush thoroughly with water. If swallowed, drink plenty of water.

Prepared by	Seventh Generation Inc.
Issuing Date	21 April 2021
Revision Date	21 April 2021
Revision Note	Revised Sections 3, 8, 11 and 15.

Please note: This product is manufactured and marketed for professional use or consumer use and should be used as directed on the product label for the intended purpose. Seventh Generation warrants that this product conforms to our standard specification when released to the market and when used according to directions. To the best of our knowledge, the information contained herein is accurate. However, we do not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any product is the sole responsibility of the user. All products may present unknown hazards and should be used with requisite caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other abbreviations used in this document:

DOT – (U.S.) Department of Transportation
EPA – (U.S.) Environmental Protection Agency
IARC – International Agency for Research on Cancer
NTP – (U.S. Department of Health and Human Services) National Toxicology Program
OSHA – (U.S.) Occupational Safety and Health Administration
TDG – (Canadian) Transport of Dangerous Goods
WHMIS – (Canadian) Workplace Hazardous Materials Information System

End of Safety Data Sheet

Arm & Hammer™ Fabric Softener Sheets

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 04/01/2015 Date of issue: 04/01/2015 Supersedes Date: 03/10/2008 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Arm & Hammer™ Fabric Softener Sheets

Intended Use of the Product

Fabric Softener

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328
www.churchdwight.com

Emergency Telephone Number

Emergency Number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US)

Eye Irrit. 2A H319
Aquatic Chronic 1 H410

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS07 GHS09

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H319 - Causes serious eye irritation.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US) : P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P391 - Collect spillage.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) 35 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Quaternary ammonium compounds, di-C14-18-alkyldimethyl, methyl sulfates	(CAS No) 68002-58-4	60 - 70	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 1, H410
Fatty acids, C14-18, ethoxylated	(CAS No) 68154-30-3	25 - 35	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth. Do NOT induce vomiting.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes irritation.

Inhalation: Not an anticipated rate of exposure given product form. Inhalation of vapors from dryer sheet may cause upper respiratory tract irritation.

Skin Contact: Repeated or prolonged skin contact may cause irritation.

Eye Contact: Causes serious eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None known.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Sulfur compounds. Nitrogen compounds.

Reference to Other Sections Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not allow product to spread into the environment. Avoid skin and eye contact. Avoid breathing (vapors, dust, fumes).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions Avoid release to the environment. Contact competent authorities after a spill.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Keep in suitable, closed containers for disposal.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do no eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store in original container. Keep away from heat, sparks and flame.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) Fabric Softener

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational or bulk quantities: Gloves. Protective goggles.

Hand Protection: For occupational or bulk quantities: Wear protective gloves.

Eye Protection: For occupational or bulk quantities: Chemical safety goggles.

Skin and Body Protection: For occupational or bulk quantities: Wear suitable protective clothing.

Respiratory Protection: Not required for normal conditions of use. Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	White, thin, nonwoven sheets
Odor	:	Fresh Floral
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	Not available
Freezing/Melting Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	93.33 °C (200 °F) Closed cup, for coating material
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Upper/Lower Flammable Limit	:	Not available
Vapor Pressure	:	Not available

Relative Vapor Density at 20 °C	:	Not available
Specific Gravity	:	Not available
Solubility	:	Negligible in water
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Temperatures above 90 °F.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Thermal decomposition generates: Carbon oxides (CO, CO_2). Sulfur and Nitrogen compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and/or each hazardous ingredient, and are consistent with the product type.

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes serious eye irritation. Consumer exposure data shows 461 reported total exposures that were treated, 114 (20%) had no outcome, 24 (5%) had minor outcomes and 0.9% had moderate. There were no reported major outcomes.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Not an anticipated route of exposure given product form. Inhalation of vapors from dryer sheet may cause upper respiratory tract irritation.

Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None known.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data: Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Very toxic to aquatic life with long lasting effects.

Persistence and Degradability Not established. May cause long-term adverse effects in the environment.

Bioaccumulative Potential Not established.

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology – Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Arm & Hammer™ Fabric Softener Sheets	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Quaternary ammonium compounds, di-C14-18-alkyldimethyl, methyl sulfates (68002-58-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Fatty acids, C14-18, ethoxylated (68154-30-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Arm & Hammer™ Fabric Softener Sheets	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Quaternary ammonium compounds, di-C14-18-alkyldimethyl, methyl sulfates (68002-58-4)
Listed on the Canadian DSL (Domestic Substances List)

Fatty acids, C14-18, ethoxylated (68154-30-3)
Listed on the Canadian NDSL (Non-Domestic Substances List)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 04/01/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H410	Very toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

Church & Dwight

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1-800-524-1328

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) and its latest amendment

Issuing Date: 23-Jul-2021 **Revision date** 23-Jul-2021 **Revision Number** 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Form	Mixture
Product Name	ARIEL Washing Powder
Product Identifier	90017422_A_RET_CLP_EUR_SAW
Synonyms	C-90017422-002
Product group	Trade Product

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use	Intended for general public
Main user category	SU 21 - Consumer uses: Private households (= general public = consumers)
Use category	PC35 - Washing and cleaning products (including solvent based products)
Uses advised against	No information available
Product category	Laundry Powder

1.3. Details of the supplier of the safety data sheet

Details of the supplier of the safety data sheet	Procter & Gamble UK Brooklands, Weybridge, Surrey, KT13 0XP, UK Tel: 01932 896000 Fax: 01932 896200
E-mail Address	pgsds.im@pg.com

1.4. Emergency telephone number

Emergency Telephone	(UK) Emergency Tel: 0800 328 8304 (IRL) Emergency Tel: 1800 509 497

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Serious eye damage/eye irritation Category 2 - (H319)

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

Adverse human health effects and symptoms
No information available

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008

Signal word Warning

Hazard statements H319 - Causes serious eye irritation

Precautionary statements P102 - Keep out of reach of children
P305 - IF IN EYES:
P351 - Rinse cautiously with water for several minutes
P312 - Call a POISON CENTER or doctor if you feel unwell

EUH208 - Contains Isoeugenol May produce an allergic reaction.

2.3. Other hazards

Other hazards which do not result in classification No presence of PBT and vPvB ingredients.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Chemical Name	CAS No	EC No	REACH registration number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	M-Factor (long-term)	M-Factor
Sodium Carbonate	497-19-8	207-838-8	01-2119485498-19	10 - 20	Eye Irrit. 2(H319)		
Sodium Carbonate Peroxide	15630-89-4	239-707-6	01-2119457268-30	10 - 20	Ox. Sol. 3(H272) Acute Tox. 4 (Oral)(H302) Eye Dam. 1(H318)		
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	270-115-0	01-2119489428-22	10 - 20	Acute Tox. 4 (Oral)(H302) Skin Irrit. 2(H315) Eye Dam. 1(H318) Aquatic Chronic 3(H412)		
Sodium Silicate	1344-09-8	215-687-4	01-2119448725-31	5 - 10	Skin Irrit. 2(H315) Eye Dam. 1(H318) STOT SE 3(H335)		
C12-14 Pareth-n	68439-50-9	Polymer		1 - 5	Acute Tox. 4 (Oral)(H302) Eye Dam. 1(H318) Aquatic Chronic 3(H412)		

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

Skin contact IF ON SKIN: Wash with plenty of water and soap. Remove/Take off immediately all contaminated clothing. If skin irritation occurs:. Get immediate medical advice and attention. Discontinue use of product.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Ingestion IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation Coughing. Sneezing.

Symptoms/injuries after skin contact Redness. Swelling. Dryness. Itching.

Symptoms/injuries after eye contact Severe pain. Redness. Swelling. Blurred vision.

Symptoms/injuries after ingestion Oral mucosal or gastro-intestinal irritation. Nausea. Vomiting. Excessive secretion.

Diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Refer to section 4.1.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Dry chemical powder. Alcohol resistant foam. Carbon dioxide (CO_2).

Extinguishing Media Which Must Not Be Used For Safety Reasons Not relevant.

5.2. Special hazards arising from the substance or mixture

Explosion hazard Product is not explosive.

Reactivity No dangerous reaction known under conditions of normal use

5.3. Advice for firefighters

Special protective equipment for fire-fighters No specific firefighting instructions required.

Protective equipment and precautions for firefighters In case of inadequate ventilation wear respiratory protection.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear suitable gloves and eye/face protection.

Advice for emergency responders Wear suitable gloves and eye/face protection.

6.2. Environmental precautions

Environmental precautions Consumer products ending up down the drain after use. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Methods for containment Scoop solid spill into closing containers.

Methods for cleaning up Small quantities of solid spill: wash down with water. Large Spills:. Scoop solid spill into closing containers. This material and its container must be disposed of in a safe way, and as per local legislation.

Other information Other information.

6.4. Reference to other sections

Other information Refer to Sections 8 and 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with eyes. Use personal protective equipment as required. Avoid dust formation. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Store in original container. Refer to section 10.

Incompatible products Refer to section 10.

Incompatible Materials Refer to section 10

Prohibitions on mixed storage Not relevant.

Requirements for storage rooms and containers Store in a cool area. Store in a dry area. Keep away from heat.

7.3. Specific end use(s)

Cleaning/washing agents and additives.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

National Occupational Exposure Limits

Derived No Effect Level (DNEL)

Workers

Chemical Name	CAS No	Worker - dermal, short-term - systemic	Worker - inhalative, short-term - systemic	Worker - dermal, short-term - local
Sodium Carbonate Peroxide	15630-89-4			12.8 mg/kg bodyweight/day

Chemical Name	CAS No	Worker - inhalative, short-term - local	Worker - dermal, long-term - systemic	Worker - inhalative, long-term - systemic
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3		85 mg/kg bw/d	6 mg/m³
Sodium Silicate	1344-09-8		1.59 mg/kg bw/d	5.61 mg/m³

Chemical Name	CAS No	Worker - dermal, long-term - local	Worker - inhalative, long-term - local
Sodium Carbonate	497-19-8		10 mg/m³
Sodium Carbonate Peroxide	15630-89-4	12.8 mg/cm²	5 mg/m³

Consumers

Chemical Name	CAS No	Consumer - oral, long-term - systemic	Consumer - inhalative, long-term - local	Consumer - dermal, long-term - local
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	0.425 mg/kg bw/d		
Sodium Silicate	1344-09-8	0.8 mg/kg bw/d		

Chemical Name	CAS No	Consumer - inhalative, long-term - systemic	Consumer - dermal, long-term - systemic
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	1.5 mg/m³	42.5 mg/kg bw/d
Sodium Silicate	1344-09-8	1.38 mg/m³	0.8 mg/kg bw/d

Predicted No Effect Concentration (PNEC)

Chemical Name	CAS No	Fresh Water	Marine water	Intermittent release
Sodium Carbonate	497-19-8	no data; no toxicity expected	no data; no toxicity expected	no data; no toxicity expected
Sodium Carbonate Peroxide	15630-89-4	0.035 mg/L	0.035 mg/L	0.035 mg/L
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	0.268 mg/L	0.027 mg/L	0.017 mg/L
Sodium Silicate	1344-09-8	7.5 mg/L	1 mg/L	7.5 mg/L

Chemical Name	CAS No	Freshwater sediment	Marine sediment	Sewage treatment plant
Sodium Carbonate	497-19-8	no data; no toxicity expected	no data; no toxicity expected	no data; no toxicity expected
Sodium Carbonate Peroxide	15630-89-4			16.24 mg/L
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	8.1 mg/kg sediment dw	6.8 mg/kg sediment dw	3.43 mg/L
Sodium Silicate	1344-09-8			348 mg/L

Chemical Name	CAS No	Soil	air	Oral
Sodium Carbonate	497-19-8	no data; no toxicity expected		
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	35 mg/kg soil dw		

8.2. Exposure controls

Appropriate engineering controls No information available

Personal protective equipment Protective personal equipment only required in case of professional use or for large packs (not for household packs). For consumer use please follow recommendation as indicated on the label of the product.

Hand Protection Wear suitable gloves.

Eye Protection Wear eye/face protection.

Skin and Body Protection Not relevant.

Respiratory Protection Not relevant.

Thermal hazards Not relevant.

Environmental exposure controls Prevent that the undiluted product reaches surface waters.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Property	Value / Units	Test Method / Notes
Appearance	Solid	
Physical state	Solid	
Color	White with coloured speckles	
Odor	pleasant (perfume)	
Odor threshold	No Data Available	Perceived odor at typical use conditions
pH	9.5 - 11.4	OECD 122
Melting point / freezing point	No Data Available	Not available. This property is not relevant for the safety and classification of this product
Initial boiling point and boiling range	No data available	Not applicable. This property is not relevant for solid product forms
Flash point	No data available	Not applicable. This property is not relevant for solid product forms
Relative Evaporation Rate (butylacetate=1)	No data available	Not available. This property is not relevant for the safety and classification of this product
Flammability	Not relevant	The product is not flammable
Upper/lower flammability or explosive limits	No data available	Not available. This property is not relevant for the safety and classification of this product
Vapor pressure	No data available	Not applicable. This property is not relevant for solid product forms
Relative density	0.4 - 0.9	TMR. A.3
Solubility	Soluble in water	
Partition coefficient	Not available	Not applicable. This property is not relevant for mixtures
Autoignition temperature	No data available	Not available. This property is not relevant for the safety and classification of this product
Decomposition temperature	No data available	Not available. This property is not relevant for the safety and classification of this product
Viscosity	No Data Available	Not applicable. This property is not relevant for solid product forms
Explosive properties	No data available	Not applicable. This product is not classified as explosive as it does not contain any substances which possesses explosive properties CLP (Art 14 (2)).
Oxidizing properties	Product is not an oxidizer -UN.O.1	

9.2. Other information

Other information No information available.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
See section 10.1 on reactivity for more information.

10.4. Conditions to avoid
None under normal use conditions.

10.5. Incompatible materials
Not relevant.

10.6. Hazardous decomposition products
None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture

Acute toxicity	Not Classified. Based on the available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.
Skin sensitization	Not Classified. Based on the available data, the classification criteria are not met.
Respiratory sensitization	Not Classified. Based on the available data, the classification criteria are not met.
Germ cell mutagenicity	Not Classified. Based on the available data, the classification criteria are not met.
Carcinogenicity	Not Classified. Based on the available data, the classification criteria are not met.
Reproductive toxicity	Not Classified. Based on the available data, the classification criteria are not met.
STOT - single exposure	Not Classified. Based on the available data, the classification criteria are not met.
STOT - repeated exposure	Not Classified. Based on the available data, the classification criteria are not met.
Aspiration hazard	Not Classified. Based on the available data, the classification criteria are not met.

Substances in the mixture

Chemical Name	CAS No	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Carbonate	497-19-8	2800 mg/kg bw	> 2000 mg/kg bw (US EPA 16 CFR 1500.40)	-
Sodium Carbonate Peroxide	15630-89-4	893 mg/kg bw (US EPA 1984)	> 2000 mg/kg bw (US EPA)	-
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	1080 mg/kg bw (OECD 401)	> 2000 mg/kg bw (OECD 402)	-
Sodium Silicate	1344-09-8	3400 mg/kg bw (OECD 401)	> 5000 mg/kg bw	> 2.06 mg/L air (OECD 403)
C12-14 Pareth-n	68439-50-9	>300-2000 mg/kg bw (Rat)	> 5000 mg/kg bw	-

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects No known adverse effects on the functioning of water treatment plants under normal use conditions as recommended. The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute toxicity

Chemical Name	CAS No	Fish	Algae/aquatic plants	Crustacea	Toxicity to microorganisms
Sodium Carbonate	497-19-8	300 mg/L (Lepomis macrochirus; 96 h)	-	200 mg/L (Ceriodaphnia sp.; 48 h)	-
Sodium Carbonate Peroxide	15630-89-4	70.7 mg/L (Pimephales promelas; 96 h)	-	4.9 mg/L (Daphnia pulex; 48 h)	-

Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	1.67 mg/L (Guideline: US EPA 850.1075; Lepomis macrochirus; 96 h)	7.4 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	2.9 mg/L (OECD 202; Daphnia magna; 48 h)	-
Sodium Silicate	1344-09-8	281 mg/L (Oncorhynchus mykiss; 96 h)	> 345.4 mg/L (Desmodesmus subspicatus; 72 h)	1700 mg/L (EU Method C.2; Daphnia magna; 48 h)	>348 mg/L (Pseudomonas putida; 18 h)
C12-14 Pareth-n	68439-50-9	>1-10 mg/L (OECD 203; Cyprinus carpio; flow-through test)	>1-10 mg/L (OECD 201; Desmodesmus subspicatus (green algae); static test)	> 1 - 10 mg/L (OECD 202; Daphnia magna; static test)	-

Chronic Toxicity

Chemical Name	CAS No	Toxicity to fish (NOEC or ECx)*	Toxicity to algae (NOEC or ECx)*	Toxicity to daphnia and other aquatic invertebrates (NOEC or ECx)*	Toxicity to Microorganisms (NOEC or ECx)*
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	0.23 mg/L (// OECD 210; Oncorhynchus mykiss; 72 d)	< 1.28 mg/L (OECD 201; Desmodesmus subspicatus; 3 d)	1.18 mg/L (// OECD 211; Daphnia magna; 21 d)	
Sodium Silicate	1344-09-8	348 mg/L ((OECD 203; Danio rerio; 4 d)			

12.2. Persistence and degradability

Persistence and degradability .

Chemical Name	CAS No	Persistence and degradability	Ready Biodegradation Test (OECD 301)	Biodegradation Other Tests
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3		85% CO2; OECD 301 B	85% CO2; 29 d; OECD 301 B
C12-14 Pareth-n	68439-50-9		> 70 % (OECD 301 A (new version); 28 d; aerobic) and > 60 %(OECD 301 B; 28 d; aerobic)	

12.3. Bioaccumulative potential

Bioaccumulative potential No information available.

Chemical Name	CAS No	Bioaccumulative potential	Octanol/water partition coefficient
Sodium Carbonate	497-19-8	Not measured	
Sodium Carbonate Peroxide	15630-89-4	Not measured	
Sodium C10-13 Alkyl Benzenesulfonate	68411-30-3	Not expected to bioaccumulate due to the low log Kow (log Kow < 4)	1.4
Sodium Silicate	1344-09-8	Not measured	

12.4. Mobility in soil

Mobility No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Other adverse effects No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products Dispose of in accordance with local regulations.

Disposal Recommendations The waste codes/waste designations below are in accordance with EWC. Waste must be delivered to an approved waste disposal company. Waste is to be kept separate from other

	types of waste until its disposal. Do not throw waste product into the sewer. Where possible recycling is preferred to disposal or incineration. For handling waste, see measures described in section 7. Empty, uncleaned packaging need the same disposal considerations as filled packaging.
Waste codes / waste designations according to EWC / AVV	20 01 29* - detergents containing dangerous substances 15 01 10* - packaging containing residues of or contaminated by dangerous substances

13.2 Additional information

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not relevant
14.3 Transport hazard class(es)	No information available
14.4 Packing group	Not relevant
14.5 Marine pollutant	Not regulated
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not relevant
14.3 Transport hazard class(es)	No information available
14.4 Packing group	No information available
14.5 Marine pollutant	Not regulated

ADR

14.1 UN number or ID number	Not relevant
14.2 UN proper shipping name	Not relevant
14.3 Transport hazard class(es)	No information available
14.4 Packing group	Not relevant
14.5 Marine pollutant	Not regulated

RID

14.1 UN number or ID number	Not relevant
14.2 UN proper shipping name	Not relevant
14.3	
14.4 Packing group	Not relevant
14.5 Marine pollutant	Not regulated

ADN

14.1 UN number	Not relevant
14.2 UN proper shipping name	Not relevant
14.3	
14.4 Packing group	Not relevant
14.5 Marine pollutant	Not regulated

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulations

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended	Contains no REACH substances with Annex XVII restrictions.
Regulation (EC) No. 1907/2006,	Contains no substance on the REACH candidate list.

REACH Annex XVII Substances subject to restriction on marketing and use as amended

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation Contains no REACH Annex XIV substances.

CESIO Recommendations The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Other regulations, restrictions and prohibition regulations Regulation (EC) No. 648/2004 (Detergents regulation). Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]. Registration, Evaluation, Authorization, and Restriction of Chemicals (REACh) Regulation (EC 1907/2006).

National regulatory information
No information available

15.2. Chemical safety assessment

Chemical Safety Assessment No chemical safety assessment has been carried out for this mixture per REACH regulation.

Section 16: OTHER INFORMATION

16.1 Indication of changes

Issuing Date:	23-Jul-2021
Revision date	23-Jul-2021
Revision Note	Not relevant

16.2 Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ATE: Acute Toxicity Estimate
DNEL: Derived No Effect Level
EC50: Calculated concentration causing a 50% reduction in cellular reproduction
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
LC50: Lethal Concentration to 50% of a test population
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Cooperation and Development
OEL: Occupational Exposure Limit
PBT: Persistent, Bioaccumulative and Toxic substance
PNEC(s): Predicted No Effect Concentration(s)
REACH- Registration, Evaluation and Authorization of Chemicals
vPvB: Very Persistent and Very Bioaccumulative

16.3 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

- Calculation method

Serious eye damage/eye irritation
Category 2 - Calculation method

16.4 Full text of H-Statements referred to under sections 2 and 3

H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage

H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H412 - Harmful to aquatic life with long lasting effects

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and its amendment Regulation (EU) 2015/830

16.5 Training Advice

Normal use of this product shall imply use in accordance with the instructions on the packaging.

16.6 Further information

Salts listed in Section 3 without a REACh Registration number are exempt, based on Annex V.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

End of Safety Data Sheet

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 01/12/2015 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Arm & Hammer® Liquid Laundry Detergent plus Oxiclean

Intended Use of the Product

Use of the Substance/Mixture: Laundry Detergent.

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328
www.churchdwight.com

Emergency Telephone Number

Emergency number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Aquatic Acute 2	H401
Aquatic Chronic 3	H412

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS07

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H401 - Toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US) : P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.

P321 - Specific treatment (see section 4).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification:

Other Hazards: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition may emit toxic and irritating fumes. May cause an allergic reaction in sensitive individuals.

Unknown Acute Toxicity (GHS-US)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt	(CAS No) 9004-82-4	1 – 5, 5 – 9.86	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Alcohols, C12-15, ethoxylated	(CAS No) 68131-39-5	0.1 – 1, 1 – 5, 5 - 6.88	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Sodium carbonate	(CAS No) 497-19-8	1.3 - 3.5	Eye Irrit. 2A, H319
Benzenesulfonic acid, alkyl derivatives	(CAS No) 42615-29-2	0.1 – 1 , 1 – 2.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 2, H401
Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl-	(CAS No) 80-54-6	<0.1, 0.1 – 0.198	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Tinopal CBS	(CAS No) 27344-41-8	<0.1, 0.1 – 0.12	Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2A, H319 Aquatic Acute 2, H401

Multiple WHMIS ranges have been utilized due to varying composition.

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes skin irritation. Causes eye irritation.

Inhalation: Prolonged exposure to liquid may cause a mild irritation.

Skin Contact: Causes skin irritation. May cause an allergic reaction in sensitive individuals.

Eye Contact: Causes eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: No additional information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: NOT FLAMMABLE

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Nitrogen oxides. Sulfur oxides. Toxic fumes and irritating fumes are released.

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. Spilled material may present a slipping hazard. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapors, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Absorb and/or contain spill with inert material, then place in suitable container.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated to decomposition, material may emit toxic and irritating fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Wash hands and forearms thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures, direct sunlight, heat, incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s)

Laundry Detergent.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: For Occupational workplace settings: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For Occupational workplace settings and bulk quantities: Gloves. Protective goggles. Protective clothing.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: In case of splash hazard: safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Not generally required under normal conditions of use.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Blue,colorless
Odor	:	Perfumed or Unscented
Odor Threshold	:	Not available
pH	:	8.5-9.5
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	Not combustible
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific Gravity	:	1.02-1.03

Solubility	:	Complete.
Partition coefficient: n-octanol/water	:	Not available
Viscosity	:	300 cP
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable at standard temperature and pressure.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Heat. Extremely high or low temperatures. Incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO2). Nitrogen oxides. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Suspected of causing birth defects (through oral route)

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Causes skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: No additional information available.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Benzenesulfonic acid, alkyl derivatives (42615-29-2)	
LD50 Oral Rat	437 mg/kg
LD50 Dermal Rabbit	501 mg/kg

Sodium carbonate (497-19-8)	
LD50 Oral Rat	4090 mg/kg
LC50 Inhalation Rat	2300 mg/m³ (Exposure time: 2 h)
Tinopal CBS (27344-41-8)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	3.6 mg/l/4h
Alcohols, C12-15, ethoxylated (68131-39-5)	
LD50 Oral Rat	1600 mg/kg
LD50 Dermal Rabbit	2500 mg/kg

Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)	
LD50 Oral Rat	1600 mg/kg
Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl- (80-54-6)	
LD50 Oral Rat	> 1000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Toxic to aquatic life with long lasting effects.

Benzenesulfonic acid, alkyl derivatives (42615-29-2)	
LC50 Fish 1	2.9 - 5 mg/l (Exposure time: 96 h, pimephales promelas)
Sodium carbonate (497-19-8)	
LC50 Fish 1	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	310 - 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

Tinopal CBS (27344-41-8)	
LC50 Fish 1	76 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 2	10 (10.0 - 11.0) mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
NOEC (acute)	1.37 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])
Alcohols, C12-15, ethoxylated (68131-39-5)	
LC50 Fish 1	0.59 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)	
EC50 Other Aquatic Organisms 1	3.12 mg/l (Species Ceriodaphnia, exposure time: 48 hr)
Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl- (80-54-6)	
LC50 Fish 1	2.2 - 4.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	10.7 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Persistence and Degradability

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean	
Persistence and Degradability	May cause long-term adverse effects in the environment.

Bioaccumulative Potential

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean	
Bioaccumulative Potential	Not established.
Sodium carbonate (497-19-8)	
BCF fish 1	(no bioaccumulation)

Tinopal CBS (27344-41-8)	
BCF fish 1	< 1
Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl- (80-54-6)	
Log POW	4.2 (at 24 °C)

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

14.4 In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal and international regulations

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Sodium carbonate (497-19-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Sustances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Tinopal CBS (27344-41-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Sustances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Alcohols, C12-15, ethoxylated (68131-39-5)

Listed on the EU NLP (No Longer Polymers) inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Sustances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Sustances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl- (80-54-6)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Sustances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

No additional information available

Canadian Regulations

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Benzenesulfonic acid, alkyl derivatives (42615-29-2)	
WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

Sodium carbonate (497-19-8)	
Listed on the Canadian DSL (Domestic Sustances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material

Tinopal CBS (27344-41-8)	
Listed on the Canadian DSL (Domestic Sustances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 0.1 %	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Alcohols, C12-15, ethoxylated (68131-39-5)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material

Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl- (80-54-6)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 01/12/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

GHS Full Text Phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Repr. 2	Reproductive toxicity Category 2
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1B	Skin sensitization Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H232	May form combustible dust concentrations in air
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328

Arm & Hammer® Liquid Laundry Detergent plus Oxiclean

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

North America GHS US 2012 & WHMIS

SAFETY DATA SHEET

Issuing Date: 03-Mar-2015 **Revision Date:** 03-Mar-2015 **Version** 1

1. IDENTIFICATION

Product Name	Ultra Downy Fabric Softener - Free and Gentle
Product ID:	96686630_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended Use	Laundry Care
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division. Ivorydale Technical Centre. 5289 Spring Grove Avenue, Cincinnati, Ohio 45217-1087 USA
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Not Classified.

Hazard Statements	None
Hazard pictograms	None
Precautionary Statements - Prevention	None
Precautionary Statements - Response	None
Precautionary Statements - Storage	None
Precautionary Statements - Disposal	None
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Ethanol	-	No	64-17-5	1 - 5
Octadecanoic acid, 1,1'-[(methylimino)di-2,1-ethanediyl] ester	-	No	13998-76-0	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Environmental precautions Keep out of waterways. Do not discharge product into natural waters without pre-treatment or adequate dilution.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m^3

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m^3	TWA: 1000 ppm TWA: 1880 mg/m^3	STEL: 1000 ppm	STEL: 1000 ppm

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	Various color by product
Odor	None
Odor threshold	No information available

Property	Values	Note
pH value	3.0 - 3.13	
Melting/freezing point	9.4 °C / 49 °F	
Boiling point/boiling range	84.4 - 90 °C / 184 - 194 °F	
Flash point	> 82 °C / > 181 °F	Product is an aqueous solution containing <= 24% alcohol and> 50% water
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	7	
Water solubility	completely soluble	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available	

VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	No known effect.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	No known effect.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	64-17-5	10470 mg/kg bw (OECD 401)	> 15800 mg/kg bw (Rabbit)	116.9 mg/L air (//OECD 403)

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.
Ethanol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Ethanol	64-17-5	X

Chemical Name	CAS-No	Massachusetts
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Ethanol	64-17-5	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 03-Mar-2015
Revision Date: 03-Mar-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

The Procter & Gamble Company
P & G Household Care
Fabric & Home Care Innovation Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS: RQ0904760
RQ0904762
RQ1307837

Issue Date: 07/23/2013

SECTION I - PRODUCT IDENTIFICATION

Identity: **Liquid Laundry Detergent** **(All 2X Concentrated Variations for Retail*)**

This MSDS applies to the following Liquid 2X Dreft Ultra Detergent Brands:
Dreft
Dreft High Efficiency

Emergency Telephone Number: 24hr P&G Operator – 1-800-879-8433

* **This MSDS applies to** all uses/handling of these products in a retail package for consumer home use.

SECTION II - HAZARDS IDENTIFICATION

Health Hazards (Acute and Chronic):

Ingestion:	May cause transient gastrointestinal irritation.
Eye Contact:	May cause mild, transient irritation.
Inhalation:	Transient irritation with prolonged exposure to concentrated material.

Signs and Symptoms of Exposure:

Ingestion:	May result in nausea, vomiting, and/or diarrhea.
Eye Contact:	May cause stinging, tearing, itching, swelling, and/or redness.
Skin:	Prolonged contact with concentrated material may be drying or transiently irritating to skin.

SECTION III - COMPOSITION AND INGREDIENTS

Ingredients/Chemical Name: Biodegradable surfactants (anionic and nonionic) and enzymes.

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200.

Common Name	Chemical Name	CAS No.	Composition Range	LD50
Ethanol	Ethyl alcohol	64-17-5	1 - 5%	7.06 g/kg (oral, rat)
Ethanolamine	2-Aminoethanol	141-43-5	1 - 5%	1.7g/kg (oral, rat)
Anionic Surfactants	Alcohol Ethoxysulfate, sodium salt	68585-34-2	10-30% total anionic surfactant	>2g/kg (oral, rat)
	Alcohol Sulfates, sodium salts	68585-47-7		>2000 mg/kg (oral, rat)
	Benzene sulfonic acid, monoethanolamine salt	68910-32-7		not available

SECTION IV - FIRST AID INFORMATION

Emergency and First Aid Procedures:

Ingestion: Drink a glassful of water.
Eye Contact: Flush with water for 10 to 15 minutes.
Skin: If prolonged contact occurs, rinse thoroughly with water. If spilled on clothing, change clothes.

If symptoms persist or reoccur, seek medical attention.

Other: Consumer product package has a caution statement: "CAUTION: Eye irritant. Harmful if swallowed. KEEP OUT OF REACH OF CHILDREN. If swallowed, give a glassful of water. Call a physician. In case of eye contact, flush with water."

SECTION V - FIRE FIGHTING INFORMATION

Flammable Properties: These products have a flashpoint of ≥150°F and they do not sustain combustion per D.O.T. 49 CFR 173 Appendix H method.

Explosive Limits: *LEL:* N/A *UEL*: N/A
Autoignition Temperature: N/A

Suitable Extinguishing Media: CO_2, water, foam, dry chemical.

Unsuitable Extinguishing Media: Not known.

Protection of Fire Fighters:

- **Specific Hazards arising from the chemical mixture:** Not known.
- **Protective Equipment and Precautions for Firefighters:** Standard self-contained breathing apparatus (SCBA) and full fire fighting turn-out gear (Bunker gear).

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL REGULATIONS. Small or household quantities may be disposed of in refuse or in sewer. First check with your local water treatment plant. For larger quantities, incineration is preferred. Do not landfill.

Steps To Be Taken in Case Material is Released or Spilled: Flush small or household quantities down acceptable sewer (contains biodegradable surfactants). Prevent spills from reaching a waterway. Sorbents may be used.

SECTION VII - HANDLING AND STORAGE

Precautions To Be Taken in Handling and Storing: No unusual precautions necessary.

Other Precautions: None

SECTION VIII - EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection (Specify Type): None required with normal use.

Ventilation *Local Exhaust*: None required with normal consumer use. *Special*: None

Mechanical (General): Normal/general dilution ventilation is acceptable. *Other*: None

Eye Protection: None required with normal consumer use.
Industrial Setting: If a splash is likely, chemical goggles may be needed.

Protective Gloves: None required with normal use.
Industrial Setting: Protective gloves (rubber, neoprene) should be used for prolonged direct contact.

Other Protective Equipment: None required with normal use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: All Liquid 2X Dreft Detergents are pale yellow.

Odor: All products contain perfume/fragrance except Free versions which do not contain any perfume.

Odor Threshold: Not known.

Physical State: Liquid.

Vapor Pressure Range (mm Hg): 18 - 21 @ 68°F. (20°C) (mostly water)

Vapor Density (Air=1): Not known

Boiling Point Range °F: 210 - 216° F (98.9 – 102°C)

Coefficient of Water/Oil Distribution: N/A

Solubility in Water: Completely soluble.

Flash Point: $\geq$150°F ; these products do not sustain combustion per DOT 49 CFR 173 Appendix H method)

Evaporation Rate (nBuOAc=1): Not known

Explosive Limits: *LEL:* N/A *UEL*: N/A

Percent Volatile by Volume (%): 30 – 40

Specific Gravity (H_2O=1): 1.04 to 1.09

Melting/Freezing Point: N/A

pH (10% solution): 8.1 to 8.6

Reserve Alkalinity: N/A

SECTION X - STABILITY AND REACTIVITY

Chemical Stability: Stable.

Conditions to Avoid: None known.

Materials to Avoid: None known.

Hazardous Decomposition Products: None known.

Possibility of Hazardous Reactions: None known.

SECTION XI - TOXICOLOGICAL INFORMATION

Liquid Dreft formulas have a low order of toxicity. If ingested, it may be mildly irritating. It is expected to be moderately emetic.

LD50 (oral, estimated): > 2g/kg
ED50 (emesis, estimated): ~ 0.5 g/kg

Chronic Effects: No chronic health effects reported.

Target Organs: No target organs reported.

Carcinogenicity: NTP: No
IARC: No
OSHA: No

SECTION XII - ECOLOGICAL INFORMATION

Based on ecotoxicity and fate data for the individual ingredients in these mixtures, and for related consumer household cleaning product formulations, it is expected that these mixtures would exhibit a non-hazardous order of toxicity at relevant environmental concentrations.

SECTION XIII - DISPOSAL CONSIDDREFTTIONS

Waste Disposal Method: Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with all Federal, state/provincial and local regulations.

Household Use: Consumer produced household solutions may be disposed of down the drain with running water. Consumer may discard empty container in trash, or recycle where facilities exist.

SECTION XIV - TRANSPORT INFORMATION

US DOT: These products are not regulated when transported by ground.
IATA: These products are not regulated when transported by air.
IMDG: These products are not regulated when transported by vessel.

SECTION XV - REGULATORY INFORMATION

United States

All intentionally-added components of these products are listed on the US TSCA Inventory.
EPA Registration Number: NA

SARA 313/302/304/311/312 chemicals: None

California: These products have been evaluated and do not require warning labeling under California Proposition 65.
California Hazardous Waste: Yes

State Right-to-Know and CERCLA:
The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists:

Ingredient	CAS #	Level	CERCLA RQ	State IL	MA	NJ	PA	RI
Ethanol	64-17-5	1-5%	100 lbs	X	X	X	X	X
Ethanolamine	141-43-5	1-5%	NA		X	X	X	X

Canada

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

Perfumes contained within these products covered by this MSDS comply with appropriate IFRA guidance.

P&G Hazard Rating:
Health: 2
Flammability: 1
Reactivity: 0

4=EXTREME
3=HIGH
2= MODDREFTTE
1=SLIGHT
0=NOT SIGINIFICANT

*N/A. - Not Applicable *N/K. – Not Known

Data supplied is for use only in connection with occupational safety and health.

DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

COLGATE-PALMOLIVE COMPANY
SAFETY DATA SHEET

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version	Revision Date:	SDS Number:	Date of last issue: 2016/08/08
1.4	2017/03/07	660000000778	Date of first issue: 2015/10/08

SECTION 1. IDENTIFICATION

Product name : FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER B02703900000

Product code : 200000046979

Manufacturer or supplier's details

Company name of supplier : Colgate-Palmolive Co
300 Park Avenue
New York, NY 10022

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Global-CHEMTREC- +1 703-741-5970

Recommended use of the chemical and restrictions on use

Recommended use : Formulated all purpose cleaner for household use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0	>= 1 - < 5

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version	Revision Date:	SDS Number:	Date of last issue: 2016/08/08
1.4	2017/03/07	660000000778	Date of first issue: 2015/10/08

SECTION 4. FIRST AID MEASURES

General advice	:	Do not leave the victim unattended.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire-fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-	:	Use personal protective equipment.

gency procedures

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version	Revision Date:	SDS Number:	Date of last issue: 2016/08/08
1.4	2017/03/07	660000000778	Date of first issue: 2015/10/08

Tightly fitting safety goggles

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	purple
pH	:	7.0
Flash point	:	> 200 °F
Density	:	1 g/cm3

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

SODIUM DODECYL BENZENE SULFONATE (LINEAR):

Acute oral toxicity : LD50 (Rat): 1,080 - 1,980 mg/kg

Method: No information available.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Components:

SODIUM DODECYL BENZENE SULFONATE (LINEAR):

Result: Severe skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

SODIUM DODECYL BENZENE SULFONATE (LINEAR):

Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

SODIUM DODECYL BENZENE SULFONATE (LINEAR):

Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental Occupational Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version	Revision Date:	SDS Number:	Date of last issue: 2016/08/08
1.4	2017/03/07	660000000778	Date of first issue: 2015/10/08

SECTION 14. TRANSPORT INFORMATION

DOT :
Not regulated.

TDG :
Not regulated.

IATA :
Not regulated.

IMDG :
Not regulated.

ADR :
Not regulated.

International Regulations

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

Pennsylvania Right To Know

WATER	7732-18-5
SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0
2-PHENOXYETHANOL	122-99-6
SODIUM SULFATE	7757-82-6

New Jersey Right To Know

WATER	7732-18-5
PROPYLENE GLYCOL PROPYL ETHER	1569-01-3
SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

California List of Hazardous Substances

SODIUM DODECYL BENZENE SULFONATE (LINEAR)	25155-30-0

The components of this product are reported in the following inventories:

TSCA : All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

FABULOSO ALL PURPOSE CLEANER LIQUID LAVENDER

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

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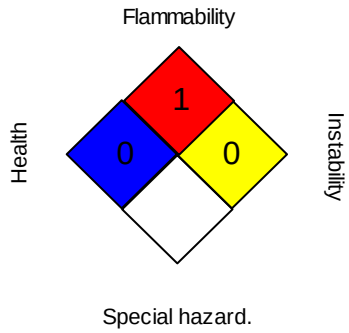
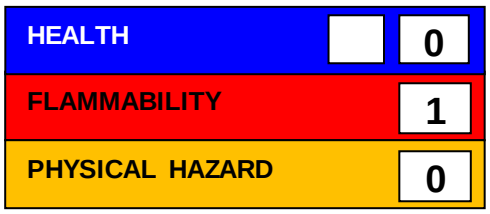
1.4	2017/03/07	660000000778	Date of first issue: 2015/10/08

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.

Revision Date : 2017/03/07

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

The Procter & Gamble Company
P & G Household Care
Fabric & Home Care Innovation Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS: RQ1004013 RQ1008778
RQ1211127 RQ1004017
RQ1400356 RQ1004015
RQ 1407567 RQ1404751

Issue Date: 10/09/2014

SECTION I - PRODUCT IDENTIFICATION

Identity: **Liquid Laundry Detergent** **(All 2X Concentrated Variations for Retail*)**

This MSDS applies to the following Liquid 2X Gain Ultra Detergent Brands:

Gain (Original, Lavender, Original Clean Boost, Apple Mango Tango,
Gain (Original Fresh, Island Fresh, Fresh Awakenings, Floral Fusion, Spring Lavender, Ocean Escape)
Gain w/Bleach Alternative (Outdoor Sunshine, Dazzle & Shine)
Gain Joyful Expressions (Apple Mango Tango, Mandarin Lime Fusion)
Gain with Baking Soda (Fresh Water Sparkle)
Gain with OxiBooster (Icy Fresh Fizz)
Gain with Febreze Freshness (Hawaiian Aloha, Thai Dragon Fruit)
Gain Touch of Softness (Simply Fresh, Cotton Fresh)
Gain with Bleach Alternative Dazzle & Shine

High Efficiency Variants:

Gain HE (Ultra Original Scent, Original Fresh, Spring Lavender, Island Fresh, Apple Mango Tango)
Gain Joyful Expressions HE (Apple Mango Tango)
Gain with Febreeze Freshness HE (Thai Dragon Fruit, Hawaiian Aloha)
Gain Plus Febreeze Freshness HE Sunflower Sunshine
Gain OxiBooster HE

Emergency Telephone Number: 24hr P&G Operator – 1-800-879-8433

* **This MSDS applies to** all uses/handling of these products in a retail package for consumer home use.

SECTION II - HAZARDS IDENTIFICATION

Health Hazards (Acute and Chronic):

Ingestion: May cause transient gastrointestinal irritation.
Eye Contact: May cause mild, transient irritation.
Inhalation: Transient irritation with prolonged exposure to concentrated material.

Signs and Symptoms of Exposure:

Ingestion: May result in nausea, vomiting, and/or diarrhea.
Eye Contact: May cause stinging, tearing, itching, swelling, and/or redness.
Skin: Prolonged contact with concentrated material may be drying or transiently irritating to skin.

SECTION III - COMPOSITION AND INGREDIENTS

Ingredients/Chemical Name: Biodegradable surfactants (anionic and nonionic) and enzymes.

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200.

Common Name	Chemical Name	CAS No.	Composition Range	LD50
Ethanol	Ethyl alcohol	64-17-5	1 - 5%	7.06 g/kg (oral, rat)
Ethanolamine	2-Aminoethanol	141-43-5	0 - 5%	1.7g/kg (oral, rat)
Anionic Surfactants	Alcohol Ethoxysulfate, sodium salt	68585-34-2	10-30% total anionic surfactant	>2g/kg (oral, rat)
	Alcohol Sulfates, sodium salts	68585-47-7		>2000 mg/kg (oral, rat)
	Benzene sulfonic acid, sodium salt	68081-81-2		438 mg/kg (oral, rat) 1330 mg/kg (oral, mouse)
	Benzene sulfonic acid, monoethanolamine salt	68910-32-7		not available
Nonionic Surfactants	Alcohol ethoxylate	68439-49-6	1-5% total nonionic surfactant	5300 mg/kg (oral, rat)

SECTION IV - FIRST AID INFORMATION

Emergency and First Aid Procedures:

Ingestion: Drink a glassful of water.
Eye Contact: Flush with water for 10 to 15 minutes.
Skin: If prolonged contact occurs, rinse thoroughly with water. If spilled on clothing, change clothes.

If symptoms persist or reoccur, seek medical attention.

Other: Consumer product package has a caution statement: "CAUTION: Eye irritant. Harmful if swallowed. KEEP OUT OF REACH OF CHILDREN. If swallowed, give a glassful of water. Call a physician. In case of eye contact, flush with water."

SECTION V - FIRE FIGHTING INFORMATION

Flammable Properties: These products have a flashpoint of ≥150°F and they do not sustain combustion per D.O.T. 49 CFR 173 Appendix H method.

Explosive Limits: *LEL:* N/A *UEL*: N/A
Autoignition Temperature: N/A

Suitable Extinguishing Media: CO_2, water, foam, dry chemical.

Unsuitable Extinguishing Media: Not known.

Protection of Fire Fighters:

- **Specific Hazards arising from the chemical mixture:** Not known.
- **Protective Equipment and Precautions for Firefighters:** Standard self-contained breathing apparatus (SCBA) and full fire fighting turn-out gear (Bunker gear).

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL REGULATIONS. Small or household quantities may be disposed of in refuse or in sewer. First check with your local water treatment plant. For larger quantities, incineration is preferred. Do not landfill.

Steps To Be Taken in Case Material is Released or Spilled: Flush small or household quantities down acceptable sewer (contains biodegradable surfactants). Prevent spills from reaching a waterway. Sorbents may be used.

SECTION VII - HANDLING AND STORAGE

Precautions To Be Taken in Handling and Storing: No unusual precautions necessary.

Other Precautions: None

SECTION VIII - EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection (Specify Type): None required with normal use.

Ventilation *Local Exhaust*: None required with normal consumer use. *Special*: None

Mechanical (General): Normal/general dilution ventilation is acceptable. *Other*: None

Eye Protection: None required with normal consumer use.
Industrial Setting: If a splash is likely, chemical goggles may be needed.

Protective Gloves: None required with normal use.
Industrial Setting: Protective gloves (rubber, neoprene) should be used for prolonged direct contact.

Other Protective Equipment: None required with normal use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: All Liquid 2X Gain Detergents are green except Free products which are amber.

Odor: All products contain perfume/fragrance except Free versions which do not contain any perfume.

Odor Threshold: Not known.

Physical State: Liquid.

Vapor Pressure Range (mm Hg): 18 - 21 @ 68°F. (20°C) (mostly water)

Vapor Density (Air=1): Not known

Boiling Point Range °F: 210 - 216° F (98.9 – 102°C)

Coefficient of Water/Oil Distribution: N/A

Solubility in Water: Completely soluble.

Flash Point: ≥150°F ; these products do not sustain combustion per DOT 49 CFR 173 Appendix H method)

Evaporation Rate (nBuOAc=1): Not known

Explosive Limits: *LEL:* N/A *UEL*: N/A

Percent Volatile by Volume (%): 30 – 40

Specific Gravity (H_2O=1): 1.04 to 1.09

Melting/Freezing Point: N/A

pH (10% solution): 8.1 to 8.6

Reserve Alkalinity: N/A

SECTION X - STABILITY AND REACTIVITY

Chemical Stability: Stable.

Conditions to Avoid: None known.

Materials to Avoid: None known.

Hazardous Decomposition Products: None known.

Possibility of Hazardous Reactions: None known.

SECTION XI - TOXICOLOGICAL INFORMATION

Liquid Gain formulas have a low order of toxicity. If ingested, it may be mildly irritating. It is expected to be moderately emetic.

LD50 (oral, estimated): > 2g/kg
ED50 (emesis, estimated): ~ 0.5 g/kg

Chronic Effects: No chronic health effects reported.

Target Organs: No target organs reported.

Carcinogenicity: NTP: No
IARC: No
OSHA: No

SECTION XII - ECOLOGICAL INFORMATION

Based on ecotoxicity and fate data for the individual ingredients in these mixtures, and for related consumer household cleaning product formulations, it is expected that these mixtures would exhibit a non-hazardous order of toxicity at relevant environmental concentrations.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with all Federal, state/provincial and local regulations.

Household Use: Consumer produced household solutions may be disposed of down the drain with running water. Consumer may discard empty container in trash, or recycle where facilities exist.

SECTION XIV - TRANSPORT INFORMATION

US DOT: These products are not regulated when transported by ground.
IATA: These products are not regulated when transported by air.
IMDG: These products are not regulated when transported by vessel.

SECTION XV - REGULATORY INFORMATION

United States

All intentionally-added components of these products are listed on the US TSCA Inventory.

EPA Registration Number: NA

SARA 313/302/304/311/312 chemicals: None

California: These products have been evaluated and do not require warning labeling under California Proposition 65.

California Hazardous Waste: Yes

State Right-to-Know and CERCLA:

The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists:

Ingredient	CAS #	Level	CERCLA RQ	State				
				IL	MA	NJ	PA	RI
Ethanol	64-17-5	1-5%	100 lbs	X	X	X	X	X
Ethanolamine	141-43-5	1-5%	NA		X	X	X	X

Canada

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

Perfumes contained within these products covered by this MSDS comply with appropriate IFRA guidance.

P&G Hazard Rating:	Health: 2	4=EXTREME
	Flammability: 1	3=HIGH
	Reactivity: 0	2= MODERATE
		1=SLIGHT
		0=NOT SIGINIFICANT

*N/A. - Not Applicable *N/K. – Not Known

Data supplied is for use only in connection with occupational safety and health.

DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

OSR – 3

3/23/22

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Karen Tyll Date/Time Prepared 3/23/22 810 am

Preparer's Affiliation _____ Phone No. _____

Purpose of Investigation _____

1. OCCUPANT:

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: (Y) / N

Last Name: Reisman First Name: Lois

Address: 28 Campbell Lane Commack, NY 11725

County: Suffolk

Home Phone: _____ Office Phone: (516) 383-6893

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Multiple. Food Service, Personal Care Services, Grocery

Does it include residences (i.e., multi-use)? Y (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age_____

Is the building insulated? (Y) N How air tight? Tight (Average) Not Tight

4. AIRFLOW not completed.

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other n/a
c. Basement floor:	concrete	dirt	stone	other n/a
d. Basement floor:	uncovered	covered	covered with n/a	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls: N/A	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is: N/A	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: N/A (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

none observed within laundromat

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other Dryers

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors (Main Floor) Other _____

Air conditioning: (Central Air) Window units Open Windows None

Are there air distribution ducts present? (Y)/ N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

not applicable

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	—
1st Floor	Retail / Commercial
2nd Floor	—
3rd Floor	—
4th Floor	—

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) Please specify ____

d. Has the building ever had a fire? Y / (N) When? ____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where? ____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type? ____

g. Is there smoking in the building? Y / (N) How frequently? ____

h. Have cleaning products been used recently? (Y)/ N When & Type? Laundromat + bldg Maintenance

i. Have cosmetic products been used recently? (Y)/ N When & Type? Hair Salon + Nail Salon adjacent

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? (Y) / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? _____

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? (Y) / N

p. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? (Y) / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? its a laundromat

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service

No
(Unknown)

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? (Active)/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

N/A

First Floor:

See Attached Figure

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

See Figure

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
floor	Aura 10 x 4	55gal	good	Water and surfactant 7732-18-5		
office	gain x 15	25 fl oz	good	See SDS		
office	Chlorox bleach x13	43 fl oz	"	Sodium Hypochlorite		
"	Downy Concentrate x9	12.2 fl oz	"	See SDS		
"	Arm + Hammer fabric softener sheets x8		"	surfactents,		
	Suavital fabric softener sheets x72			See SDS		
	Tide x 37	25 fl oz		See SDS		
	Suavital fabric softener liquid x15	28.7oz				
	Suavital fabric softener liquid x24	15.2 fl oz				
	Ariel Double bags Poder x13	500g				
	Windex x 10	23oz				
	Chlorox x 4	81oz				
	Dreft x 2	46 fl oz				
	OxiClean Arm+Hamer	131oz				
	Fabuloso	210 fl oz				
	Gain	165 fl oz				
	Weiman Stainless Steel polish	17oz x2				
	Downy					
	Aura Bleach	55gal x 2		Sodium Hypochlorite		

Aura Berry Bouquet 55 gal — Surfactants

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Seventh Generation Detergent 1.5 gal see SDS

Ingredient Information

Product Name: Stainless Steel Cleaner & Polish

Product Code: 76

Ingredient	Function
Water	Cleaning agent
Mineral oil	Polishing agent
Sorbitan derivatives	Emulsifier
Propylene glycol	Cleaning agent
Fragrance	Fragrance
Polydimethylsiloxane	Polishing agent
Alcohol ethoxylate	Cleaning agent
DMDM hydantoin	Preservative

COLGATE-PALMOLIVE Company
SAFETY DATA SHEET

SUAVITEL ULTRA FABRIC SOFTENER LIQUID FIELD FLOWERS

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0 | SDS Number: 200000041426 | Revision Date: 04/09/2015

SECTION 1. IDENTIFICATION

Product name : SUAVITEL ULTRA FABRIC SOFTENER LIQUID FIELD FLOWERS

Product code : 200000041426

: B06624810006

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
300 Park Avenue
New York, NY 10022

Telephone : US: Consumer Affairs - 1-800-468-6502

Disposal considerations :

Recommended use of the chemical and restrictions on use

Recommended use : A formulated fabric softener

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion : Category 1

Serious eye damage : Category 1

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/

shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

If inhaled	:	Remove victim to fresh air. Get medical attention, if symptoms persist.
In case of skin contact	:	Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
In case of eye contact	:	Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
If swallowed	:	Drink 8 ounces of clear water. Get medical attention.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazardous combustion products	:	No hazardous combustion products are known
Special protective equipment for firefighters	:	Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protection recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	:	Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

SECTION 7. HANDLING AND STORAGE

Conditions for safe storage	:	Store at controlled room temperature at 20-25°C (68-77°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	In an industrial work environment, no special precautions or control measures are required.

Personal protective equipment

Protective measures	:	In an industrial work environment, if a splash is likely, chemical goggles may be needed. Prolonged skin contact may require protective gloves. For consumer use, no unusual precautions are necessary.
Hygiene measures	:	In an industrial work environment, avoid eye and prolonged skin contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light blue
pH	:	2.0 - 3.0
Flash point	:	> 200 °F

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition	:	None known.

products

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

STOT - single exposure

STOT - repeated exposure

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Product:

Regulation		40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks		This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No information on ecology is available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environment agency for specific rules). Do not dump in sewers, any body of water or on the ground.

SECTION 14. TRANSPORT INFORMATION

DOT : Not regulated.

TDG : Not regulated.

IATA : Not regulated.

IMDG : Not regulated.

International Regulation

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
HYDROQUINONE	123-31-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
HYDROQUINONE	123-31-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

FORMALDEHYDE 50-00-0 0.0000 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

FORMALDEHYDE 50-00-0 0.0000 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

WATER	Water	90 - 100 %
QUATERNIZED TRIETHANOLAMINE DIESTER	Not Assigned	1 - 5 %
ISOPROPANOL	67-63-0	0.1 - 1 %

New Jersey Right To Know

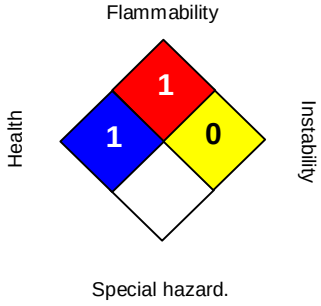
WATER	Water	90 - 100 %
QUATERNIZED TRIETHANOLAMINE DIESTER	Not Assigned	1 - 5 %

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 04/09/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Issuing Date: 07-May-2015 **Revision Date:** 07-May-2015 **Version** 1

1. IDENTIFICATION

Product Name Tide Original Scent HEC

Product ID: 97514370_RET_NG

Product Type: Finished Product - Consumer (Retail) Use Only

Recommended Use Laundry Care

Restrictions on Use Use only as directed on label.

Manufacturer

PROCTER & GAMBLE - Fabric and Home Care Division
Ivorydale Technical Centre
5289 Spring Grove Avenue
Cincinnati, Ohio 45217-1087 USA

Procter & Gamble Inc.
P.O. Box 355, Station A
Toronto, ON M5W 1C5
1-800-331-3774

E-mail Address pgsds.im@pg.com

Emergency Telephone

Transportation (24 HR)
CHEMTREC - 1-800-424-9300
(U.S./ Canada) or 1-703-527-3887
Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Acute toxicity - Oral	Category 4
Eye Damage / Irritation	Category 2B

Signal Word WARNING

Hazard Statements

Causes eye irritation
Harmful if swallowed

Hazard pictograms

Precautionary Statements - Prevention
Wash hands thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF SWALLOWED:
Rinse with plenty of water
Drink 1 or 2 glasses of water
Call a POISON CENTER or doctor/physician if you feel unwell

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	-	No	68585-34-2	10 - 15
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	-	No	68081-81-2	1 - 5
MEA-Dodecylbenzenesulfonate	-	No	68910-32-7	1 - 5
Ethanol, 2-amino-, 2-hydroxy-1,2,3-propanetricarboxylate (1:?)	-	No	17863-38-6	1 - 5
Propylene glycol	-	No	57-55-6	1 - 5
2,2'-Oxybisethanol	-	No	111-46-6	1 - 5
Ethanol	-	No	64-17-5	1 - 5
Disodium tetraborate pentahydrate	-	No	12179-04-3	1 - 5
Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	-	No	68585-47-7	1 - 5
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, sodium salt (1:5)	-	No	140-01-2	0.1 - 1.0

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact
Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m³
Disodium tetraborate pentahydrate	12179-04-3	STEL: 6 mg/m³ inhalable fraction TWA: 2 mg/m³ inhalable fraction	(vacated) TWA: 10 mg/m³	Mexico: TWA 1 mg/m³

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Propylene glycol	57-55-6			TWA: 10 mg/m³ TWA: 50 ppm TWA: 155 mg/m³	
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m³	TWA: 1000 ppm TWA: 1880 mg/m³	STEL: 1000 ppm	STEL: 1000 ppm
Disodium tetraborate pentahydrate	12179-04-3	TWA: 1 mg/m³ STEL: 3 ppm	TWA: 1 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	opaque blue
Odor	Floral
Odor threshold	No information available

Property	Values	Note
pH value	7.90 - 8.60	
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	> 65.5 °C / > 149.9 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.058	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	150 - 600 cps	
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.	

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	May be harmful if swallowed.
Eye contact	Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	May be harmful if swallowed.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	Irritating to eyes.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.

Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Target Organ Effects No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	68081-81-2	1090.00 mg/kg (rat)	-	-
Propylene glycol	57-55-6	22000 mg/kg (rat)	2000 mg/kg (rabbit)	-
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, sodium salt (1:5)	140-01-2	> 5000 mg/kg bw (OECD 401)	> 2000 mg/kg bw (OECD 402)	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	
Potassium hydroxide	1310-58-3	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X
Potassium hydroxide	1310-58-3	1000 lb	-	-	X

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Propylene glycol	57-55-6	X
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Propylene glycol	57-55-6	X
2,2'-Oxybisethanol	111-46-6	X
Ethanol	64-17-5	X
Disodium tetraborate pentahydrate	12179-04-3	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 07-May-2015
Revision Date: 07-May-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200

WINDEX® GLASS & MORE MULTI-SURFACE

Version *1*.4 Print Date 10/02/2020

Revision Date 06/20/2019 SDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name	**:**	WINDEX® GLASS & MORE MULTI-SURFACE
Recommended use	:	Hard Surface Cleaner
Restrictions on use	:	Use only as directed on label
Manufacturer, importer, supplier	:	S.C. Johnson & Son, Inc. 1525 Howe Street Racine WI 53403-2236
Telephone	:	+1-800-558-5252
Emergency telephone number	:	24 Hour Medical Emergency Phone: (866)231-5406 24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification
This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements
Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact : No special requirements

Skin contact : No special requirements

Inhalation : No special requirements.

Ingestion : No special requirements

Most important symptoms and effects, both acute and delayed

Eyes : No adverse effects expected when used as directed.

Skin effect : No adverse effects expected when used as directed.

Inhalation : No adverse effects expected when used as directed.

Ingestion : No adverse effects expected when used as directed.

Indication of any immediate medical attention and special treatment needed

See Description of first aid measures unless otherwise stated.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Container may melt and leak in heat of fire.

Further information : Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

WINDEX® GLASS & MORE MULTI-SURFACE

Version *1*.4 Print Date 10/02/2020

Revision Date 06/20/2019 SDS Number 350000014153

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wash thoroughly after handling.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep container closed when not in use.

Other data : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	blue
Odour	:	floral
Odour Threshold	:	Test not applicable for this product type
pH	:	10.7 at (25 C)
Melting point/freezing point	:	0 C
Initial boiling point and boiling range	:	100 C
Flash point	:	does not flash
Evaporation rate	:	Test not applicable for this product type
Flammability (solid, gas)	:	Does not sustain combustion.
Upper/lower flammability or explosive limits	:	Test not applicable for this product type
Vapour pressure	:	Calculated31.7 hPa
Vapour density	:	Test not applicable for this product type

Relative density	:	1.00 g/cm3 at 25 C
Solubility(ies)	:	soluble
Partition coefficient: n-octanol/water	:	Test not applicable for this product type
Auto-ignition temperature	:	Test not applicable for this product type
Decomposition temperature	:	Heating can release hazardous gases.
Viscosity, dynamic	:	similar to water
Viscosity, kinematic	:	similar to water
Oxidizing properties	:	Test not applicable for this product type
Volatile Organic Compounds Total VOC (wt. %)*	:	0.2 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified :

10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.

Conditions to avoid : Direct sources of heat.

Incompatible materials : Do not mix with bleach or any other household cleaners. Strong bases

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 > 5000 mg/kg
Acute inhalation toxicity : LC50 > 10 mg/L

Acute dermal toxicity : LD50 > 5000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-

Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects **:** None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport
Not classified as dangerous in the meaning of transport regulations.

Sea transport
Not classified as dangerous in the meaning of transport regulations.

Air transport
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

State Right To Know

No components are subject to the Massachusetts Right to Know Act.		
No components are subject to the Minnesota "Right To Know" Act		
No components are subject to the New Jersey "Right To Know" Act		
Pennsylvania RTKL	Water	7732-18-5
	Ammonium Hydroxide	1336-21-6

WINDEX® GLASS & MORE MULTI-SURFACE

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16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	0
Reactivity	0

NFPA Ratings

Health	1
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

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