

**SUMMARY OF SVI RESULTS  
FOR  
FORMER AVNET BUILDING**

**GLARO, INC.  
Site No. 152124  
735 Old Willets Path  
Hauppauge, New York 11788**

**February 2014**

RECEIVED

MAR 12 2014

NYSDEC Reg 1 Haz Waste Rem



**PREPARED FOR:  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SUNY @ STONY BROOK  
50 CIRCLE ROAD  
STONY BROOK, NEW YORK 11790**

**PREPARED BY:  
KOST ENVIRONMENTAL SERVICES, INC.  
117 NORTH 6<sup>TH</sup> STREET  
LINDENHURST, NEW YORK 11757**

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## **I. PURPOSE**

The purpose of this Summary Report is to discuss and evaluate the soil vapor intrusion (SVI) investigation that was performed at the former Avnet building. The SVI investigation commenced in February 2013 and was recently completed in December 2013.

## **II. BACKGROUND & DISCUSSION**

The former Avnet building is a two story structure with a partial basement that occupies a total footprint of approximately 8,235 s.f. and is utilized as office area (See Figure 1).

There are seven units total with four units on the second floor and three units on the ground floor. Units A and B are occupied on the second floor with Units C and D vacant. Units G and I are occupied on the first floor with Unit H vacant. The basement area is vacant. Units F and G on the floor plans are common areas.

Correspondence from the New York State Department of Environmental Conservation (NYSDEC) Region One Division of Environmental Remediation, dated January 16, 2013 requested that the former Avnet building, located to the north of the Glaro site, be investigated for the potential of soil vapor intrusion. The request included that two interior sub-slab soil gas and two indoor air samples be collected concurrently with an upwind ambient air sample. A pre-sampling product inventory was also requested.

Subsequent to access issues pertaining to tenants that occupied the Avnet building, The pre-sampling product inventory was performed on October 24, 2013 and 12/12/2013 with no chemical products identified (See Appendix). The two interior sub-slab soil gas samples, two indoor air samples and an upwind ambient air samples were then performed on June 20, 2013. The two interior sub-slab soil gas samples and two indoor air samples were obtained from: (1) the basement area beneath the common area F and along the southerly foundation wall and identified as samples Avnet IA-01 for indoor air and Avnet SS-01 for sub-slab; and (2) the southwest corner of Unit G which was the closest space in proximity to the Glaro site and identified as samples Avnet IA-02 for indoor air and Avnet SS-02 for sub-slab. The ambient air sample was obtained upwind of the Avnet

building on a grass area west of the Glaro site and was identified as Avnet-OA.

The analytical results obtained from the 06/20/2013 sampling indicated elevated concentrations of tetrachloroethene in both indoor air samples and the ambient air sample with significantly lower concentrations in both interior sub-slab locations (See Summary Data Table in Appendix). Based upon these results and subsequent to data usability results, an additional sampling event was scheduled.

On 10/24/2013, sampling was performed at the same locations that were utilized in the 06/20/2013 sampling event. The only difference pertained to the up-gradient ambient air sample that was changed due to existing wind conditions. The ambient air sample for this event was situated to the west of the Avnet building.

The analytical results obtained from the 10/20/2013 sampling indicated concentrations of tetrachloroethene in both indoor air samples and the ambient air sample but at significantly lower concentrations than the 06/20/2013 sampling event i.e. an order of magnitude. The interior sub-slab concentrations remained approximately the same but were decreased. Based upon these results and subsequent to data usability results, an additional sampling event was scheduled for verification purposes.

On 12/12/2013, the third sampling event was performed at the same locations that were utilized in the 06/20/2013 sampling event. Also, the only difference pertained to the up-gradient ambient air sample that was changed due to existing wind conditions. The ambient air sample for this event was situated to the north of the Avnet building.

The analytical results obtained from the 12/12/2013 sampling indicated concentrations of tetrachloroethene in both indoor air samples at non-detectable concentrations and the ambient air sample slightly above non-detect concentrations. The interior sub-slab concentrations remained approximately the same as the 10/20/2013 concentrations.

### III. FINDINGS

#### Sub-Slab

A review of the three sampling events indicated consistent low level concentrations of tetrachloroethene with respect to the interior sub-slab soil gas sampling for the basement area (Avnet SS-01-01, Avnet SS-01-02 and Avnet SS-01-03).

	<b>Avnet SS-01-01 06/20/13</b>	<b>Avnet SS-01-02 10/24/13</b>	<b>Avnet SS-01-03 12/12/13</b>
Tetrachloroethene	39 ug/M3	16 ug/M3	34 ug/M3

A review of the three sampling events indicated consistent low level concentrations of tetrachloroethene with respect to the interior sub-slab soil gas sampling for the first floor area (Avnet SS-02-01, Avnet SS-02-02 and Avnet SS-02-03).

	<b>Avnet SS-01-01 06/20/13</b>	<b>Avnet SS-01-02 10/24/13</b>	<b>Avnet SS-01-03 12/12/13</b>
Tetrachloroethene	42 ug/M3	<14 ug/M3	34 ug/M3

#### Indoor Air

A review of the three sampling events indicated an elevated concentration of tetrachloroethene for the initial sampling on 06/20/13 and low concentrations for the two subsequent sampling events with respect to the interior indoor air sampling for the basement area (Avnet IA-01-01, Avnet IA-01-02 and Avnet IA-01-03).

	<b>Avnet IA-01-01 06/20/13</b>	<b>Avnet IA-01-02 10/24/13</b>	<b>Avnet IA-01-03 12/12/13</b>
Tetrachloroethene	160 ug/M3	3.2 ug/M3	<1.4 ug/M3

A review of the three sampling events indicated an elevated concentration of tetrachloroethene for the initial sampling on 06/20/13 and low concentrations for the two subsequent sampling events with respect to the indoor air sampling for the first floor area (Avnet IA-02-01, Avnet IA-02-02 and Avnet IA-02-03).

	<b>Avnet IA-01-01 06/20/13</b>	<b>Avnet IA-01-02 10/24/13</b>	<b>Avnet IA-01-03 12/12/13</b>
Tetrachloroethene	140 ug/M3	2.5 ug/M3	<1.4 ug/M3

### **Outdoor Air**

A review of the three sampling events indicated an elevated concentration of tetrachloroethene for the initial sampling on 06/20/13 and low concentrations for the two subsequent sampling events with respect to the outdoor air sampling (Avnet OA-01-01, Avnet OA-01-02 and Avnet OA-01-03).

	<b>Avnet OA-01-01 06/20/13</b>	<b>Avnet OA-01-02 10/24/13</b>	<b>Avnet OA-01-03 12/12/13</b>
Tetrachloroethene	64 ug/M3	<1.4 ug/M3	3 ug/M3

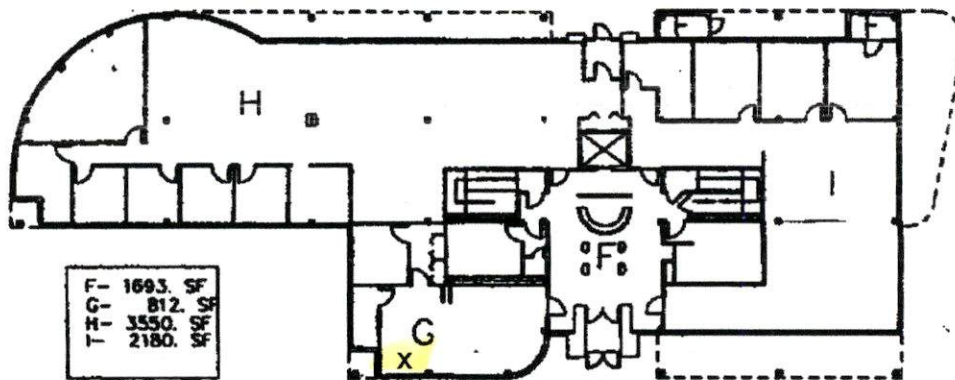
## **V. CONCLUSIONS**

The sampling event performed in December 2013 for the former Avnet building regarding outdoor air, indoor air and sub-slab sampling is consistent with the previous sampling event of October 2013. Both the December and October sampling events indicate low concentrations of tetrachloroethene. These concentrations are all in accordance with NYSDOH guidelines of 30ug/m<sup>3</sup>. Based upon these sampling results, it is concluded that the former Avnet building indoor air quality meets the guidelines established by the NYSDOH regarding exposure to tetrachloroethene.

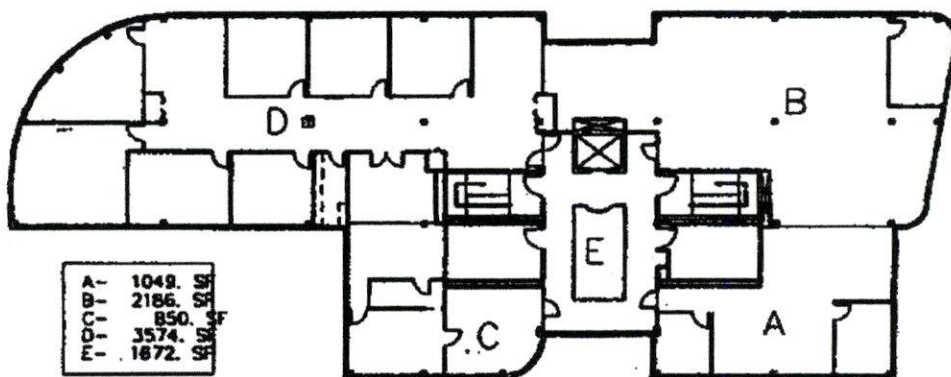
The sampling event performed in June 2013 indicated elevated concentrations of tetrachloroethene in the outdoor air, sub-slab and indoor air sampling locations. All sampling location analytical results exceeded the NYSDOH guidelines. One conclusion that can be offered regarding these sampling results pertains to the outdoor up-gradient sampling location which was located to the west of the former Avnet building and east of the Hauppauge Industrial complex. Introduction of tetrachloroethene into the intake system of the Avnet HVAC system and distribution within the building is a possibility. This outdoor condition did not exist for the October and December sampling events with respect to elevated concentrations of tetrachloroethene. In addition, this June sampling event also indicated higher concentrations of tetrachloroethene in the indoor air when compared to the sub-slab concentrations which would indicate a possible source of tetrachloroethene other than from the sub-slab. This sampling event has unusual characteristics and appears to be an anomaly.

## FIGURES

## **SAMPLING LOCATIONS**

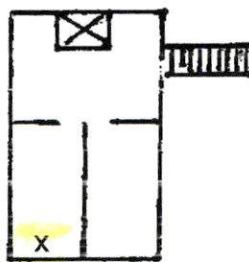


**FIRST FLOOR PLAN**  
Scale 1/4" = 1'-0"



**SECOND FLOOR FURNITURE PLAN**  
Scale 1/4" = 1'-0"

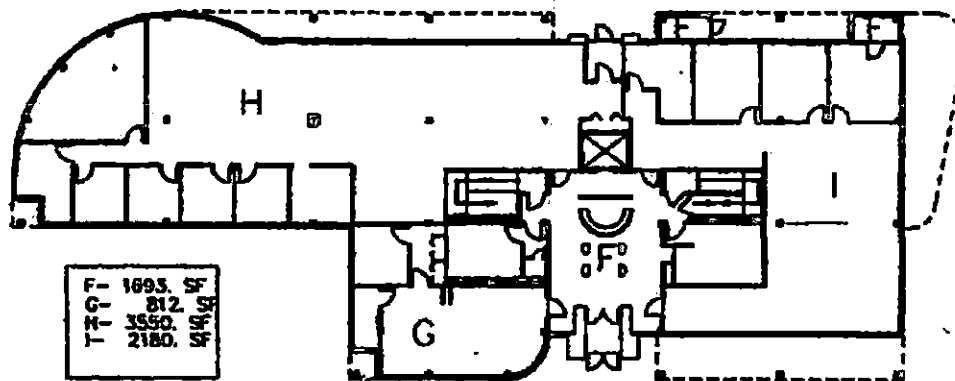
Basement Area



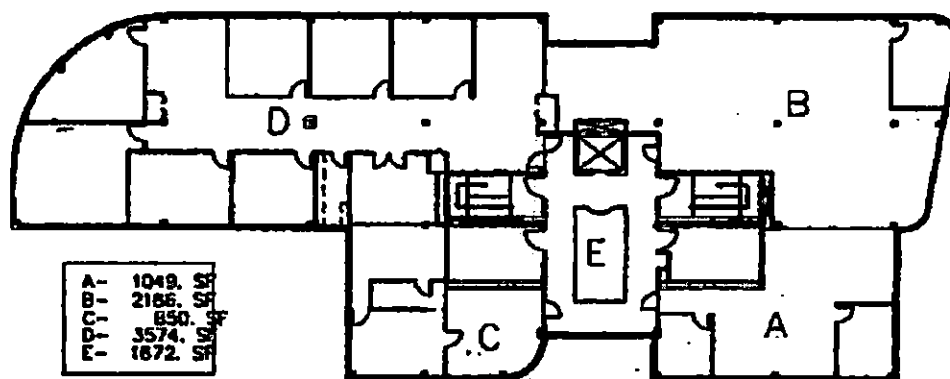
x = sampling locations SVI & indoor air

SAMPLING LOCATIONS

**BUILDING LAYOUT & OCCUPANCY**



**FIRST FLOOR PLAN**  
 2500-1-10



**SECOND FLOOR FURNITURE PLAN**  
 2500-1-11

# OCCUPANCY

UNIT A OCCUPIED

UNIT B OCCUPIED

UNIT C VACANT

UNIT D VACANT

UNIT E COMMON AREA

UNIT F COMMON AREA

UNIT G OCCUPIED

UNIT H VACANT

UNIT I OCCUPIED

BASEMENT VACANT

BUILDING LAYOUT & OCCUPANCY

## **APPENDIX**

**PHOTOLOG**



**FORMER AVNET BUILDING – SOUTHERLY EXPOSURE**



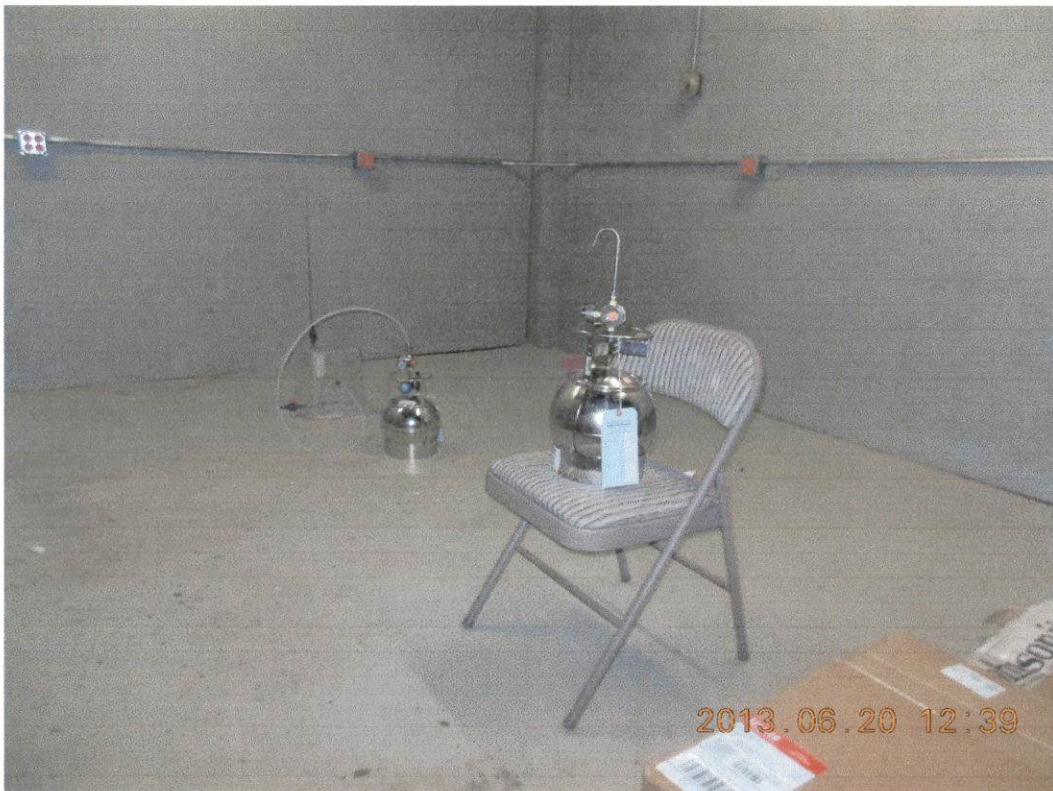
**UNIT G**



**SAMPLING UNIT G - SVI**



**SAMPLING UNIT G - INDOOR AIR**



**BASEMENT SAMPLING – SVI & INDOOR AIR**



**AMBIENT AIR SAMPLING**

## **DATA TABLES**

735 Calebs Path  
Hauppauge, NY  
Spill # 1-52-124



AVNET Building  
June 30, October 24, December 12, 2013 Air Analytical Results (ug/M<sup>3</sup>)  
TestAmerica, Inc.  
Analytical Method EPA TO-15

Location	AVNET_IA-01-01	AVNET_IA-01-02	AVNET_IA-01-03	AVNET_IA-02-01	AVNET_IA-02-02	AVNET_IA-02-03	AVNET_OA-01-01	AVNET_OA-01-02	AVNET_OA-01-03	AVNET_SS-01-01	AVNET_SS-01-02	AVNET_SS-01-03	AVNET_SS-02-01	AVNET_SS-02-02	AVNET_SS-02-03
Date Collected	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013
Time Collected	6:54 PM	5:11 PM	6:02 PM	6:52 PM	5:14 PM	6:01 PM	6:57 PM	5:18 PM	6:13 PM	6:53 PM	5:09 PM	6:03 PM	6:51 PM	5:14 PM	6:00 PM
1,1 Dichloromethane	<6.5	<0.81	<0.81	<3.2	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<6.5	<0.81	<1.6	<8.1	<3.2
1,1 Dichloroethene	<6.3	<0.79	<0.79	<3.2	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<6.3	<0.79	<1.6	<7.9	<3.2
1,1,1 Trichloroethane	<8.7	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.7	<1.1	<2.2	<11	<4.4
1,1,2 Trichloroethane	<8.7	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.7	<1.1	<2.2	<11	<4.4
1,1,2,2 Tetrachloroethane	<11	<1.4	<1.4	<5.5	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<11	<1.4	<2.7	<14	<5.5
1,2 Dibromoethane	<12	<1.5	<1.5	<6.1	<1.5	<1.5	<3.1	<1.5	<1.5	<3.1	<12	<1.5	<3.1	<15	<6.1
1,2 Dichlorobenzene	<9.6	<1.2	<1.2	<4.8	<1.2	<1.2	<2.4	<1.2	<1.2	<2.4	<9.6	<1.2	<2.4	<12	<4.8
1,2 Dichloroethane	<6.5	<0.81	<0.81	<3.2	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<6.5	<0.81	<1.6	<8.1	<3.2
1,2 Dichloroethene	<6.3	<0.79	<0.79	<3.2	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<6.3	<0.79	<1.6	<7.9	<3.2
1,2 Dichloropropane	<7.4	<0.92	<0.92	<3.7	<0.92	<0.92	<1.8	<0.92	<0.92	<1.8	<7.4	<0.92	<1.8	<9.2	<3.7
1,2,4 Trichlorobenzene	<30	<3.7	<3.7	<15	<3.7	<3.7	<7.4	<3.7	<3.7	<7.4	<30	<3.7	<7.4	<37	<15
1,2,4 Trimethylbenzene	<7.9	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.9	<0.98	<2	<9.8	<3.9
1,3 Butadiene	<3.5	<0.44	0.53	<1.8	<0.44	<0.44	<0.88	<0.44	<0.44	<0.88	<3.5	<0.44	<0.88	<4.4	<1.8
1,3 Dichlorobenzene	<9.6	<1.2	<1.2	<4.8	<1.2	<1.2	<2.4	<1.2	<1.2	<2.4	<9.6	<1.2	<2.4	<12	<4.8
1,3,5 Trimethylbenzene	<7.9	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.9	<0.98	<2	<9.8	<3.9
1,4 Dichlorobenzene	18	<1.2	<1.2	7.4	<1.2	<1.2	<2.4	<1.2	<1.2	<2.4	<9.6	<1.2	<2.4	<12	<4.8
1,4-Dioxane	<140	<18	<18	<72	<18	<18	<36	<18	<18	<36	<140	<18	<36	<180	<72
2 Chlorotoluene	<8.3	<1	<1	<4.1	<1	<1	<2.1	<1	<1	<2.1	<8.3	<1	<2.1	<10	<4.1
2,2,4-Trimethylpentane	<7.5	<0.93	<0.93	<3.7	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<7.5	<0.93	<1.9	<9.3	<3.7
2-Hexanone	<16	<2	<2	<8.2	<2	<2	<4.1	<2	<2	<4.1	<16	<2	<4.1	<20	<8.2
3-Chloropropene	<13	<1.6	<1.6	<6.3	<1.6	<1.6	<3.1	<1.6	<1.6	<3.1	<13	<1.6	<3.1	<16	<6.3
4-Ethyltoluene	<7.9	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.9	<0.98	<2	<9.8	<3.9
4-Methyl-2-Pentanone	<16	<2	<2	<8.2	<2	<2	<4.1	<2	<2	<4.1	<16	<2	<4.1	<20	<8.2
Acetone	<95	13	15	<48	12	<12	65	<12	<12	41	<10	80	<24	570	400
Benzene	<5.1	<0.64	<0.64	<2.6	<0.64	<0.64	<1.3	<0.64	0.65	<1.3	31	0.93	<1.3	<6.4	<2.6
Benzyl Chloride	<8.3	<1	<1	<4.1	<1	<1	<2.1	<1	<1	<2.1	<8.3	<1	<2.1	<10	<4.1
Bromodichloromethane	<11	<1.3	<1.3	<5.4	<1.3	<1.3	<2.7	<1.3	<1.3	<2.7	<11	<1.3	<2.7	<13	<5.4
Bromochloroethane	<7	<0.87	<0.87	<3.5	<0.87	<0.87	<1.7	<0.87	<0.87	<1.7	<7	<0.87	<1.7	<8.7	<3.5
Bromoform	<17	<2.1	<2.1	<8.2	<2.1	<2.1	<4.1	<2.1	<2.1	<4.1	<17	<2.1	<4.1	<21	<8.2
Bromomethane	<6.2	<0.78	<0.78	<3.1	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<6.2	<0.78	<1.6	<7.8	<3.1
Butane	<9.5	1.4	2.6	<4.8	<1.2	2.1	8.1	<1.2	2.2	<2.4	12	2.8	<2.4	<12	<4.8
c-1,3 Dichloropropene	<7.3	<0.91	<0.91	<3.6	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<7.3	<0.91	<1.8	<9.1	<3.6
Carbon Disulfide	<12	<1.6	<1.6	<6.2	8.2	<1.6	<3.1	<1.6	<1.6	<3.1	<12	<1.6	<3.1	<16	<6.2
Carbon Tetrachloride	<10	<1.3	<1.3	<5	<1.3	<1.3	<2.5	<1.3	<1.3	<2.5	<10	<1.3	<2.5	<13	<5
Chlorobenzene	<7.3	<0.92	<0.92	<3.7	<0.92	<0.92	<1.8	<0.92	<0.92	<1.8	<7.3	<0.92	<1.8	<9.2	<3.7
Chlorodifluoromethane	830	2.7	<1.8	300	3	<1.8	<3.5	<1.8	<1.8	230	62	2.9	160	<18	<7.1
Chloroethane	<11	<1.3	<1.3	<5.3	<1.3	<1.3	<2.6	<1.3	<1.3	<2.6	<11	<1.3	<2.6	<13	<5.3
Chloroform	<7.8	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.8	<0.98	<2	<9.8	<3.9
Chloromethane	<8.3	1.2	1.3	<4.1	1.1	1.3	<2.1	1.7	1.2	<2.1	<8.3	<1	<2.1	<10	<4.1
cis-1,2-Dichloroethene	<6.3	<0.79	<0.79	<3.2	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<6.3	<0.79	<1.6	<7.9	<3.2
Cyclohexane	<5.5	<0.69	<0.69	<2.8	<0.69	<0.69	<1.4	<0.69	<0.69	<1.4	<5.5	<0.69	<1.4	<6.9	<2.8
Dibromochloromethane	<14	<1.7	<1.7	<6.8	<1.7	<1.7	<3.4	<1.7	<1.7	<3.4	<14	<1.7	<3.4	<17	<6.8
Dichlorodifluoromethane	<20	2.9	2.6	<9.9	2.8	2.7	<4.9	2.7	2.6	<4.9	<20	3	16	<25	21
Ethylbenzene	<6.9	<0.87	<0.87	<3.5	<0.87	<0.87	<1.7	<0.87	<0.87	<1.7	<6.9	2.7	<1.7	<8.7	<3.5
Freon 113	<12	<1.5	<1.5	<6.1	<1.5	<1.5	<3.1	<1.5	<1.5	<3.1	<12	<1.5	<3.1	<15	<6.1
Freon 114	<11	<1.4	<1.4	<5.6	<1.4	<1.4	<2.8	<1.4	<1.4	<2.8	<11	<1.4	<2.8	<14	<5.6
Heptane	<6.6	<0.82	<0.82	<3.3	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<6.6	1.4	<1.6	<8.2	<3.3
Hexachlorobutadiene	<17	<2.1	<2.1	<8.2	<2.1	<2.1	<4.3	<2.1	<2.1	<4.3	<17	<2.1	<4.3	<21	<8.2
Hexane	<5.6	<0.7	<0.7	<2.8	<0.7	<0.7	<1.4	<0.7	<0.7	<1.4	<5.6	1.4	<1.4	<7	<2.8
Isopropyl Alcohol	130	33	29	61	19	16	<25	<12	<12	37	290	89	<25	<120	66
Isopropylbenzene	<7.9	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.9	<0.98	<2	<9.8	<3.9
m + p Xylene	<17	<2.2	<2.2	<8.7	<2.2	<2.2	<4.3	<2.2	<2.2	<4.3	<17	7.1	<4.3	<22	<8.7
Methyl Ethyl Ketone	<12	2.2	<1.5	<5.9	1.9	1.8	20	<1.5	<1.5	14	90	36	14	40	31
Methyl Methacrylate	<16	<2	<2	<8.2	<2	<2	<4.1	<2	<2	<4.1	<16	<2	<4.1	<20	<8.2
Methylene Chloride	<14	<1.7	2.4	<6.9	<1.7	2.2	<3.5	<1.7	1.9	<3.5	<14	<1.7	6	<17	<6.9

735 Calebs Path  
Hauppauge, NY  
Spill # 1-52-124



AVNET Building  
June 30, October 24, December 12, 2013 Air Analytical Results (ug/M<sup>3</sup>)  
TestAmerica, Inc.  
Analytical Method EPA TO-15

Location	AVNET_IA-01-01	AVNET_IA-01-02	AVNET_IA-01-03	AVNET_IA-02-01	AVNET_IA-02-02	AVNET_IA-02-03	AVNET_OA-01-01	AVNET_OA-01-02	AVNET_OA-01-03	AVNET_SS-01-01	AVNET_SS-01-02	AVNET_SS-01-03	AVNET_SS-02-01	AVNET_SS-02-02	AVNET_SS-02-03
Date Collected	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013	6/20/2013	10/24/2013	12/12/2013
Time Collected	6:54 PM	5:11 PM	6:02 PM	6:52 PM	5:14 PM	6:01 PM	6:57 PM	5:18 PM	6:13 PM	6:53 PM	5:09 PM	6:03 PM	6:51 PM	5:14 PM	6:00 PM
n-Butylbenzene	<8.8	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.8	<1.1	<2.2	<11	<4.4
n-Propylbenzene	<7.9	<0.98	<0.98	<3.9	<0.98	<0.98	<2	<0.98	<0.98	<2	<7.9	<0.98	<2	<9.8	<3.9
Naphthalene	<21	<2.6	<2.6	<10	<2.6	<2.6	<5.2	<2.6	<2.6	<5.2	<21	<2.6	<5.2	<26	<10
o-Xylene	<6.9	<0.87	<0.87	<3.5	<0.87	<0.87	<1.7	<0.87	<0.87	<1.7	9.8	3.5	2.1	<8.7	4.1
p-Isopropyltoluene	<8.8	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.8	<1.1	<2.2	<11	<4.4
n-Butylbenzene	<8.8	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.8	<1.1	<2.2	<11	<4.4
Styrene	<6.8	<0.85	<0.85	<3.4	<0.85	<0.85	<1.7	<0.85	<0.85	<1.7	<6.8	1	<1.7	<8.5	<3.4
1,3-Dichloropropene	<7.3	<0.91	<0.91	<3.6	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<7.3	<0.91	<1.8	<9.1	<3.6
n-Butylbenzene	<8.8	<1.1	<1.1	<4.4	<1.1	<1.1	<2.2	<1.1	<1.1	<2.2	<8.8	<1.1	<2.2	<11	<4.4
n-Butylmethylether	<5.8	<0.72	<0.72	<2.9	<0.72	<0.72	<1.4	<0.72	<0.72	<1.4	<5.8	<0.72	<1.4	<7.2	<2.9
Tert-Butyl Alcohol	<120	<15	<15	<61	<15	<15	<30	<15	<15	<30	<120	<15	<30	<150	<61
Tetrachloroethene	160	3.2	<1.4	140	2.5	<1.4	64	<1.4	3	39	16	34	42	<14	34
Tetrahydrofuran	<120	<15	<15	<59	<15	<15	<29	<15	<15	<29	<120	18	<29	<150	<59
Toluene	<6	3.9	<0.75	<3	3.5	2.2	19	2.5	3.3	<1.5	20	7.1	4.2	<7.5	<3
Total Xylenes	<6.9	<0.87	<0.87	<3.5	<0.87	<0.87	2.9	<0.87	1.1	2.2	25	11	4.2	18	7
trans-1,2-Dichloroethene	<6.3	<0.79	<0.79	<3.2	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<6.3	<0.79	<1.6	<7.9	<3.2
Trichloroethylene	<8.6	<1.1	<1.1	<4.3	<1.1	<1.1	<2.1	<1.1	<1.1	2.5	<8.6	3.8	<2.1	<11	<4.3
Trichlorofluoromethane	500	49	53	180	57	23	<2.2	1.4	1.3	370	120	96	100	60	27
Vinyl Chloride	<4.1	<0.51	<0.51	<2	<0.51	<0.51	<1	<0.51	<0.51	<1	<4.1	<0.51	<1	<5.1	<2
Calculated															
Total BTEX	<24.9	3.9	<5.33	<12.6	3.5	2.2	21.9	2.5	3.95	2.2	60.8	21.33	8.4	<53.3	4.1
Total VOC's	1,638	113	106	688.4	111	51.3	179	8.3	17.25	740.5	1105.7	416.13	350.2	688	590.1

Notes:  
SS - Sublab  
IA - Indoor Air  
OA - Outdoor Air

## **DATA USABILITY SUMMARY REPORTS**

**DATA USABILITY SUMMARY REPORT  
GLARO-HAPPAUGE, NEW YORK**

Client: Environmental Assessment & Remediations, Patchogue, New York  
SDG: 200-17170  
Laboratory: Test America, Burlington, Vermont  
Site: Glaro-Happauge, New York  
Date: December 11, 2013

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	AVNET OA 01	200-17170-1	Air
2	AVNET SS 01	200-17170-2	Air
3	AVNET SS 02	200-17170-3	Air
4	AVNET IA 01	200-17170-4	Air
5	AVNET IA 02	200-17170-5	Air

A Data Usability Summary Review was performed on the analytical data for five air samples collected on June 20, 2013 by Environmental Assessment & Remediations at the Glaro site in Happauge, New York. The samples were analyzed under "*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition January 1999, EPA/625/R-96/010B*", Compendium Method TO-15, "*Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*".

The data have been evaluated according to the protocols and quality control (QC) requirements of the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Air Samples - Volatile Organic Analysis of Ambient Air in Canister and the reviewer's professional judgment.

**Organics**

The following items/criteria were reviewed for this report:

- Data Completeness
- Cover letter, Narrative, and Data Reporting Forms
- Canister Certification Blanks
- Canister Certification Pressures Differences
- Chains-of-Custody and Traffic Reports
- Holding Times
- Laboratory Control Samples
- GC/MS Tuning
- Method Blank
- Initial Calibration
- Continuing Calibration

- Compound Quantitation
- Internal Standard (IS) Area Performance
- Field Duplicate Sample Precision

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

#### Overall Evaluation of Data and Potential Usability Issues

There were no rejections of data.

Overall the data is acceptable for the intended purposes. Data were qualified for the following deficiencies.

- Acetone was qualified as estimated in two samples due to high LCS recoveries.

#### Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

#### Cover letter, Narrative, and Data Reporting Forms

- All criteria were met

#### Canister Certification Blanks

- The canister certification blanks were free of contamination.

#### Canister Certification Pressures Differences

- All criteria were met.

#### Chains-of-Custody and Traffic Reports

- All criteria were met

#### Holding Times

- All samples were analyzed within 30 days for air samples.

### Laboratory Control Samples

- The following table presents LCS percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

LCS ID	Compound	%R	Qualifier	Affected Samples
LCS 200-58196/3	Acetone	180%	J	2
LCS 200-58272/3	Acetone	162%	J	1

### GC/MS Tuning

- All criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field and Trip Blanks

- There were no field QC samples associated with the samples in this report.

### Initial Calibration

- The following table presents compounds that exceeded 30 percent relative standard deviation (%RSD) and/or average RRF values <0.05 in the initial calibration (ICAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %RSD may indicate a potential high bias. All positive results for these compounds in affected samples are considered estimated and qualified (J).

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
05/13/13	Naphthalene	33.2%/OK	None	All ND

### Continuing Calibration

- The continuing calibrations exhibited acceptable %D and RRF values.

### Compound Quantitation

- All samples required dilution prior to analysis. The reporting limits were adjusted accordingly. No action was required by the reviewer.

### Internal Standard (IS) Area Performance

- All criteria were met.

### Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:

Nancy Weaver  
Nancy Weaver  
Senior Chemist

Dated: 12/11/13

### Data Qualifiers

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was analyzed for, but was not detected above the sample reporting limit.
- R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

**DATA USABILITY SUMMARY REPORT  
GLARO-HAPPAUGE, NEW YORK**

Client: Environmental Assessment & Remediations, Patchogue, New York  
SDG: 200-19172  
Laboratory: Test America, Burlington, Vermont  
Site: Glaro-Happauge, New York  
Date: December 9, 2013

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	AVNET SS 01-2	200-19172-1	Air
2	AVNET IA 01-2	200-19172-2	Air
3	AVNET SS 02-2	200-19172-3	Air
4	AVNET IA 02-2	200-19172-4	Air
5	AVNET OA 02-2	200-19172-5	Air

A Data Usability Summary Review was performed on the analytical data for five air samples collected on October 24, 2013 by Environmental Assessment & Remediations at the Glaro site in Happauge, New York. The samples were analyzed under "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition January 1999, EPA/625/R-96/010B", Compendium Method TO-15, "Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)".

The data have been evaluated according to the protocols and quality control (QC) requirements of the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Air Samples - Volatile Organic Analysis of Ambient Air in Canister and the reviewer's professional judgment.

**Organics**

The following items/criteria were reviewed for this report:

- Data Completeness
- Cover letter, Narrative, and Data Reporting Forms
- Canister Certification Blanks
- Canister Certification Pressures Differences
- Chains-of-Custody and Traffic Reports
- Holding Times
- Laboratory Control Samples
- GC/MS Tuning
- Method Blank
- Initial Calibration
- Continuing Calibration

- Compound Quantitation
- Internal Standard (IS) Area Performance
- Field Duplicate Sample Precision

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

#### **Overall Evaluation of Data and Potential Usability Issues**

There were no rejections of data.

Overall the data is acceptable for the intended purposes. Data were qualified for the following deficiencies.

- Methyl ethyl ketone was qualified as estimated in four samples due to a high initial calibration %RSD value.

#### **Data Completeness**

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

#### **Cover letter, Narrative, and Data Reporting Forms**

- All criteria were met

#### **Canister Certification Blanks**

- The canister certification blanks were free of contamination.

#### **Canister Certification Pressures Differences**

- All criteria were met.

#### **Chains-of-Custody and Traffic Reports**

- All criteria were met

#### **Holding Times**

- All samples were analyzed within 30 days for air samples.

### Laboratory Control Samples

- The following table presents LCS percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

LCS ID	Compound	%R	Qualifier	Affected Samples
200-63557/5	Bromoform	133%	None	All ND

### GC/MS Tuning

- All criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field and Trip Blanks

- There were no field QC samples associated with the samples in this report.

### Initial Calibration

- The following table presents compounds that exceeded 30 percent relative standard deviation (%RSD) and/or average RRF values <0.05 in the initial calibration (ICAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %RSD may indicate a potential high bias. All positive results for these compounds in affected samples are considered estimated and qualified (J).

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
09/19/13	Benzyl chloride	35.1%/OK	None	All ND
	Methyl ethyl ketone	30.6%/OK	J	1-4

### Continuing Calibration

- The continuing calibrations exhibited acceptable %D and RRF values.

### Compound Quantitation

- EDS Sample ID #s 1 and 3 were analyzed at 8X and 10X dilutions, respectively. The reporting limits have been adjusted accordingly. No action was required by the reviewer.

### Internal Standard (IS) Area Performance

- All criteria were met.

### Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:

Nancy Weaver  
Nancy Weaver  
Senior Chemist

Dated: 12/11/13

### **Data Qualifiers**

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was analyzed for, but was not detected above the sample reporting limit.
- R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

**DATA USABILITY SUMMARY REPORT  
GLARO-HAUPPAUGE, NEW YORK**

Client: Environmental Assessment & Remediations, Patchogue, New York  
SDG: 200-20121  
Laboratory: Test America, Burlington, Vermont  
Site: Glaro-Hauppauge, New York  
Date: February 24, 2014

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	AVNET SS 02-3	200-20121-1	Air
1DL	AVNET SS 02-3DL	200-20121-1DL	Air
2	AVNET IA 02-3	200-20121-2	Air
3	AVNET IA 01-3	200-20121-3	Air
4	AVNET SS 01-3	200-20121-4	Air
5	AVNET OA 01-3	200-20121-5	Air

A Data Usability Summary Review was performed on the analytical data for five air samples collected on December 12, 2013 by Environmental Assessment & Remediations at the Glaro site in Hauppauge, New York. The samples were analyzed under "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition January 1999, EPA/625/R-96/010B", Compendium Method TO-15, "Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)".

The data have been evaluated according to the protocols and quality control (QC) requirements of the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Air Samples - Volatile Organic Analysis of Ambient Air in Canister and the reviewer's professional judgment.

**Organics**

The following items/criteria were reviewed for this report:

- Data Completeness
- Cover letter, Narrative, and Data Reporting Forms
- Canister Certification Blanks
- Canister Certification Pressures Differences
- Chains-of-Custody and Traffic Reports
- Holding Times
- Laboratory Control Samples
- GC/MS Tuning
- Method Blank
- Initial Calibration

- Continuing Calibration
- Compound Quantitation
- Internal Standard (IS) Area Performance
- Field Duplicate Sample Precision

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

#### **Overall Evaluation of Data and Potential Usability Issues**

There were no rejections of data.

Overall the data is acceptable for the intended purposes. Data were qualified for the following deficiencies.

- Acetone was qualified as estimated in four samples due to high continuing calibration %D values.

#### **Data Completeness**

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

#### **Cover letter, Narrative, and Data Reporting Forms**

- All criteria were met

#### **Canister Certification Blanks**

- The canister certification blanks were free of contamination.

#### **Canister Certification Pressures Differences**

- All criteria were met.

#### **Chains-of-Custody and Traffic Reports**

- All criteria were met

### Holding Times

- All samples were analyzed within 30 days for air samples.

### Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

### GC/MS Tuning

- All criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field and Trip Blanks

- There were no field QC samples associated with the samples in this report.

### Initial Calibration

- The following table presents compounds that exceeded 30 percent relative standard deviation (%RSD) and/or average RRF values <0.05 in the initial calibration (ICAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %RSD may indicate a potential high bias. All positive results for these compounds in affected samples are considered estimated and qualified (J).

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
12/12/13	Benzyl Chloride	37.0%	None	All ND
	Naphthalene	39.0%	None	
12/17/13	1,2,4-Trichlorobenzene	37.7%	None	All ND
	Naphthalene	39.2%	None	

### Continuing Calibration

- The following table presents compounds that exceeded 30 percent deviation (%D) and/or RRF values <0.05 in the continuing calibration (CCAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives.

A high %D may indicate a potential high or low bias. All results for these compounds in affected samples are considered estimated and qualified (J/UJ).

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
12/17/13	Acetone	32.8%	J/UJ	2, 3, 5
12/26/13	Acetone	30.1%	J/UJ	1, 1DL

#### Compound Quantitation

- Sample AVNET SS 02-3 exhibited a high concentration of acetone which exceeded the linear range of the instrument and was flagged (E) by the laboratory. The sample was diluted and reanalyzed and the reanalysis result for acetone should be used for reporting purposes.
- Several samples were diluted due to high concentration of target compounds. No action was taken on this basis.

#### Internal Standard (IS) Area Performance

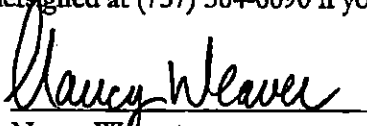
- All criteria were met.

#### Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:

  
Nancy Weaver  
Senior Chemist

Dated:

2/25/14

### Data Qualifiers

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was analyzed for, but was not detected above the sample reporting limit.
- R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

## **PRODUCT INVENTORY SURVEY**

10/24/13

## 13. PRODUCT INVENTORY FORM

Make &amp; 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
1 <sup>ST</sup> FLOOR	CONF. ROOM					
CABINET (REAR)	GLASS CLEANER	32 oz	U	SEE PHOTO	—	Y
CABINET (FRONT)	CLOROX CLEAN-UP w/ BLEACH	32 oz	U	SODIUM HYPOCHLORITE	—	N
CABINET (FRONT)	CLEAN SCREEN	1 oz	U	DI WATER + PROPYLENE POLYMERS	—	N
CABINET (FRONT)	PERMANENT/DRY-ERASE MARKERS	1 EA	U		—	N
REAR	DRY-ERASE MARKERS	1	U		—	N
ADJ. DESK	GREEN WORKS GLASS CLEANER BY CLOROX	32 oz	U	NATURAL ING.	—	N
MENT	—	—	—	—	—	—
	PAINTING MATERIAL				1.5 ppm	.
ELEVATOR EQUIP ROOM	#2 OIL	55 gal	U		3.5 ppm	N
BASEMENT	DURASOLB ABSORBENT	UNK.	D	UNK.	3.5 ppm	N
1 <sup>ST</sup> FLOOR	LABOR EDUCATION & COMMUNITY SERVICES AGENCY, INC.					
	NONE PRESENT					
1 <sup>ST</sup> FLOOR	LI FEDERATION OF LABOR, AFL-CIO					
RECEPTION / OFFICES	NONE PRESENT					
BREAK ROOM	w/ COPIER					
BREAK ROOM, REAR	COPIER SUPPLIES (PAPER, TONER, CARTRIDGES, ETC)					
BREAK ROOM, REAR	LATEX PAINT	5 gal, 2-1 gal	U		—	N

\* 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.

## 13. PRODUCT INVENTORY FORM

Make &amp; 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
BEDRM	UNDER SINK FANTASTIC, HEAVY DUTY PERFORMANCE OIL	32 oz 128 oz 12 oz	U			N
	BISSEL - FABRIC + UPHOLSTERY CLEANER	12 oz	U			N
	FANTASTIC, OXY POWER	32 oz	U			N
	PLEAZE, FURNITURE POLISH	17.02	U			N
	WINDOX ADVANCED	32 oz	U			N
	ACE CARPET CLEANER	1 gal	U			N
BEDRM	LATHEX PAINT	1 gal	U			N
BEDRM	VALANT -	UNK	(LOCATED)			N
BEDRM	VALANT - NONE PRESENT					N
BEDRM	WINDOX (2)	32 oz	U			N
BEDRM	COIN CLEANER - ELEC	1 gal	U			N
BEDRM	WATER	16 oz	U			N
BEDRM	2005	32 oz	U			N
BEDRM	LONG TERM HOME HEALTH CARE PROGRAM					N
BEDRM	HAND SANITIZER	12 oz	U	ALCOHOL		N
BEDRM	ORANGE ALL-PURPOSE	32 oz	U			N
BEDRM	PAINT, ESTATE MARKER	6	U			N
BEDRM						N

\* 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.

## 13. PRODUCT INVENTORY FORM

Make &amp; 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
ED'S M (UP)	ULTRA MIST -CHEMICAL MIST	6.75 oz	U	ALCETONE, PROPANE, BUTANE FRAGRANCE		N
	HAND SOAP, WALL DISPENSER					N
	AIR FRESHENER, WALL DISPENSER					N
EN'S M (DOWN)	HAND SOAP, WALL DISPENSER		U			N
	AIR FRESHENER, WALL DISPENSER		U			N
US (DOWN) M (US)	ODOR CONTROL PERFECT CHERAM	1 gal	U	CAS-7 68591-01-5, 58956-79-6		N
	FILM FREE RTU GLASS, SURF CLEANER	12 oz	U	ORA USE CAS 68469-46-3, 29411-28-2, 65815-73-1, 1300-72-7		N
			U, NO TOP	5 TOTAL, 2 U, 3 UO		
	SP PRO SAN, SPARKLE GLASS CLEANER	1 qt	U	CAS-7 67-63-0, 111-76-2		N
	CAREFREE PINK TALLER HAND SOAP	1 gal	U	CAS-7 151-21-3, 686-03-46-9, 778-25-4, 61785-30-8, 88-04-0		N
	PERFECT FRESH	1 gal	U	CAS-7 68591-01-5, 58956-79-6		N
	PRIME SOURCE, LMT. ALL PURPOSE	1 gal	UO	<del>27% VOS-6.0%</del> CAS-7 111-42-2, 77323-47-1, 68903-42-9, 143-07-7, 61791-08-0, 61790-12-3, 7758-25-4		N
	PRIME SOURCE MINT KLEANSE	1 gal	U	EPA REG 6836-165-68613 27% ALKYL (C <sub>14</sub> 58%, C <sub>16</sub> 28%, C <sub>18</sub> 14%), DIMETHYL BENZYL AMMONIUM CHLORIDE		N
	ZENEX ZEVASNEBU H <sub>2</sub> O	18 oz	U	CAS-7 8042-47-5, 74-98-6, 106-97-8, 64741-66-8, 63148-62-9, 7275-28-5, 9007-48-1, 7732-18-5		

\* 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.

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

**\* 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.**

**Make & Model of field instrument used:**

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

**\* 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.**