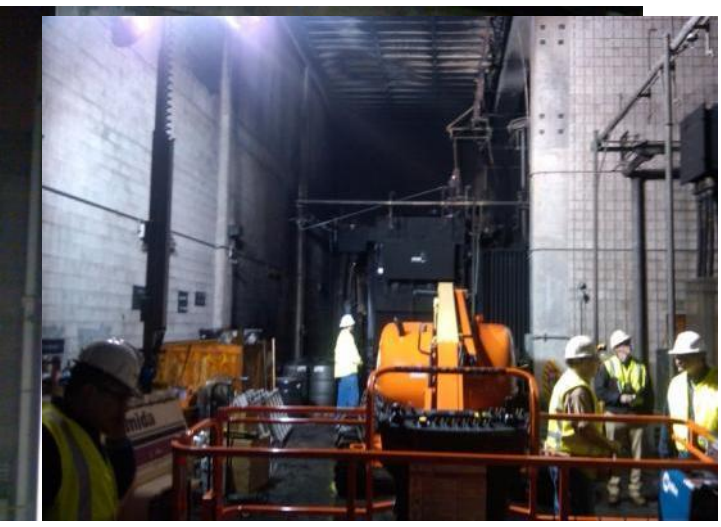
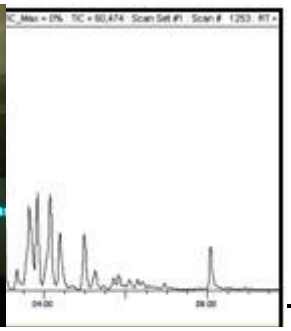
MassDEP Field Assessment and Support Team

After Incident Report	3-30,704
Boston – NSTAR Transformer Fire – Scotia Street	March 2012





Background

At approximately 6:30 PM on March 13, 2012, a fire erupted in a concrete building on 19 Scotia Street in Boston. The building was owned by NSTAR and housed two large (115,000 volt) electrical transformers. Thick black smoke billowed from the blaze, prompting the Boston Fire Department to evacuate a number of nearby buildings, including the Back Bay Hilton Hotel at 40 Dalton Street, which was immediately adjacent to the NSTAR building (see Figure 1).

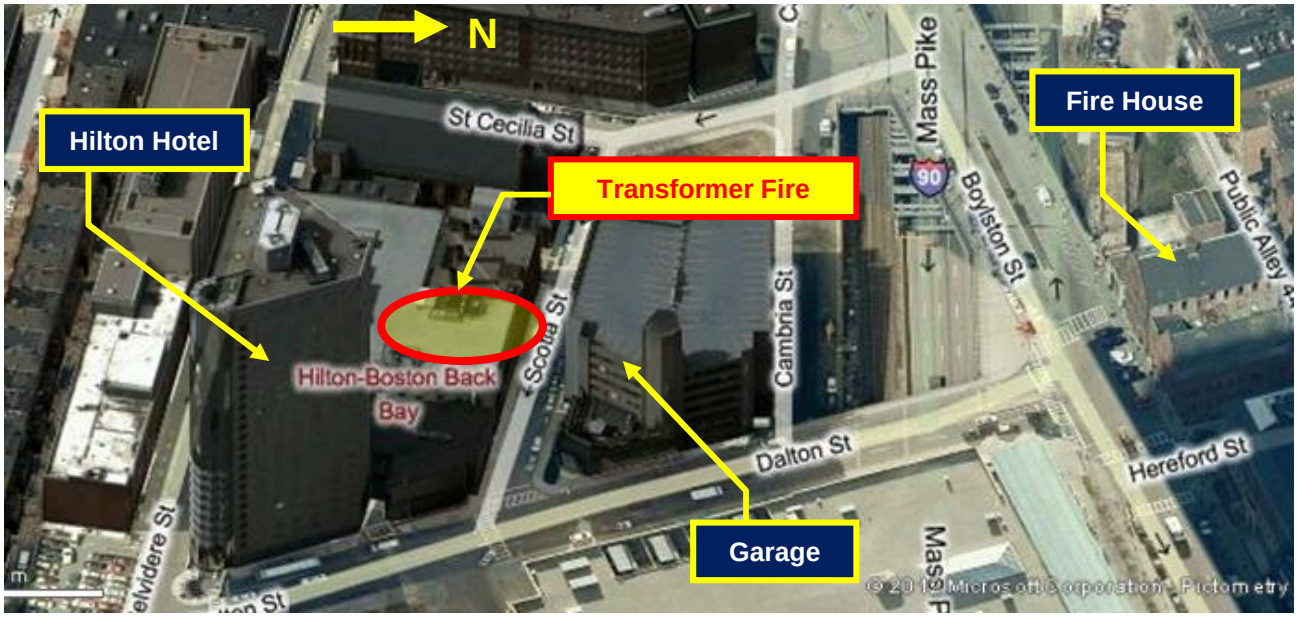


Figure 1: Location of Fire and Surrounding Impacted Receptors

Although details on the causes of the fire are not yet available, it is speculated that leakage of Mineral Oil Dielectric Fluid (MODF) from an electrical conduit that supplies this transformer station may have started and fed the fire. According the NSTAR, the MODF used in these installations were non-PCB. It is estimated that approximately 1000 gallons of MODF from this conduit may have leaked into the sub-structure of this facility.

The fire damaged one of the station's transformers, which shifted the entire electrical load to the other unit, resulting in a shut down. This created a large power outage, affecting more than 20,000 residences and businesses in parts of Boston's Back Bay, South End, Chinatown, Theater District, and Kenmore Square.

The fire was extinguished by Boston Fire Department by around 10 PM.

The building containing the transformers was a relatively new reinforced concrete structure, with metal ventilation grates (which melted from the intense heat). Reportedly, there was no asbestos containing materials in this structure. Once the fire was extinguished, a visual inspection of the areas impacted by the blaze indicated that it appeared largely free of plastic and other polymers that could generate combustion products such as Hydrogen Cyanide (polymers containing nitrogen) and/or Hydrogen Chloride (polymers containing chlorine).

FAST was activated at 8:50 PM, and arrived on scene at approximately 10:40 PM. Boston Fire and Health officials requested that FAST test air within impacted buildings, and provide recommendations on whether conditions were safe for re-occupancy.

AIR TESTING

Based upon weather records for Boston (below), the winds during the time of the fire were from the south at around 10 MPH (Figure 2):

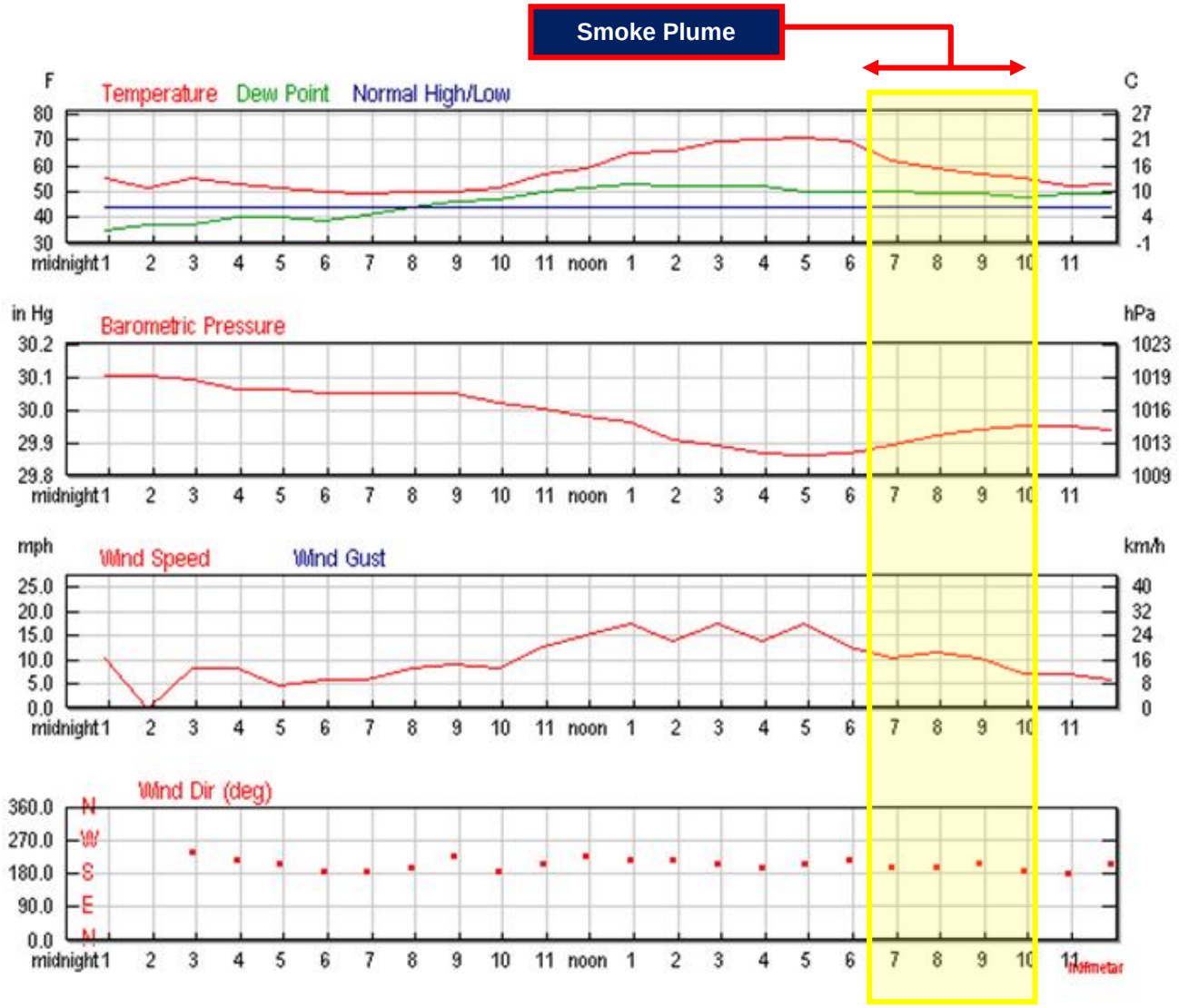


Figure 2: Metrological Conditions in Boston at Time of Fire (Weather Underground)

While overall movement of the smoke plume would be in a northerly direction, the existence of numerous tall buildings undoubtedly created localized eddies and directional anomalies. This is especially true of the 24 story Hilton hotel. While located immediately upwind of the blaze, southerly winds would have likely cause negative pressures on the northerly side of the structure, inducing movement of some of the smoke in that direction.

According to Fire Department officials, the buildings that were most impacted by the smoke plume, based upon visual and olfactory observations, were (a) a Boston Fire Department station 400 feet northerly of the fire at 941 Boylston Street (Engine 33 and Ladder 15); (b) a parking garage located immediately northerly of the fire; and (c) the Hilton Hotel, 40 Dalton Street (See Figure 1).

Accordingly, FAST staff obtained air samples from each building, using a 1 liter air sampling bag and 300 cc/min SKC air sampling pump:

- Boston Fire House: one sample, 2nd floor, southeast corner, dormitory area
- Parking Garage: one sample, 3rd level
- Hilton Hotel: three samples: 4th floor, 14th floor, 24th floor

Prior to sampling, the indoor air was screened with an MSA Sirius Multi-gas meter for volatile organic compounds (via photoionization detector), explosive gases, oxygen, and carbon monoxide, and with a RAE Systems V-RAE meter for Ammonia and Hydrogen Cyanide. No unusual readings were noted.

The five 1-liter air samples were immediately analyzed on-site in the FAST mobile laboratory, on an Inificon HAPSITE gas chromatograph with a mass spectrometer (GC/MS). The testing method used was calibrated to 35 common air contaminants, with detection limits for most analytes in the high parts per trillion range. In addition to these common contaminants, the HAPSITE GC/MS is capable of tentatively identifying more than 100,000 additional chemical compounds, based upon an automated comparison of mass spectra to a NIST database.

The data report for each analysis is attached.

The fire house and parking garage were largely free of Volatile Organic Compounds. The Hilton Hotel had slightly elevated concentrations of certain hydrocarbons, including Benzene. While these hydrocarbons appear to be fire-related, it is possible that there may have been other sources of these contaminants within the hotel (e.g., cleaning agents). In any event, none of the indentified contaminants, including benzene, exceeded short and intermediate-term exposures guidelines, including the US EPA Acute Exposure Guidelines (AEGLs).

The chromatograms for each sample were also inspected for the presence of significant concentrations of other contaminants (i.e., other than the 35 “target” analytes). While there were some additional contaminants present, they appeared to be related to low-levels of chemicals present within the air sampling bags (a known issue with bags of this nature).

The data reports were printed in the FAST vehicle and provided to local officials in the early morning hours of 3/14/12. Based upon the totality of available information and data, FAST expressed the position that the impacted buildings were safe for reoccupation, with the caveat noted that not all fire-related contaminants could be detected by available on-site equipment, including chemicals present in any soot that had been deposited within these structures. As such, follow-up assessment should be conducted as appropriate.

FAST demobilized from the scene at approximately 3:00 AM on 3/14/12. FAST members participating in this response were Tim Dame, Albe Simenas, and Team Leader John Fitzgerald.

MassDEP Field Assessment and Support Team (FAST)			AIR SCREENING DATA		RTN:			
City or Town:	Boston	Address:	Hilton - 40 Dalton Street				Location:	
Date Sampled:	3/14/12	Time:	12:15 AM	Field ID:	4th flr	Collector	Dame	fourth floor
Date Analyzed:	3/14/12	Time:	12:29 AM	Lab ID:	003	Analyst:	Fitzgerald	

Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Typical Indoor Conc µg/m³		
	ppbV	µg/m³	ppbV	µg/m³			50th%	75th%	90th%
Vinyl Chloride	N.D.	N.D.	1	2.58	0	0	<1	<1	<1
Bromomethane	N.D.	N.D.	5	22.3	0.919	0.02	<0.25	<0.25	0.6
Chloroethane	**6.7**	**17.8**	5	13.2	0.886	0.164	NA	NA	NA
Trichloromonofluoromethane	N.D.	N.D.	5	35.0	0.981	0.273	NA	NA	NA
1,1-Dichloroethene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Methylene Chloride	*0.3*	*1.0*	1	3.47	0.949	0.271	1.4	3.7	11
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	5	38.3	0.655	0.184	NA	NA	NA
1,1-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Chloroform	*0.2*	*1.1*	1	4.88	0.987	0.339	1.9	2.6	3
1,2-Dichloroethane	N.D.	N.D.	1	4.05	0.713	0.011	<2	<2	<2
1,1,1-Trichloroethane	N.D.	N.D.	1	5.46	0	0	0.5	1.1	3
Benzene	**8.3**	26.6	1	3.2	0.991	0.658	2.3	3.6	11
Carbon Tetrachloride	N.D.	N.D.	1	6.29	0.906	0.155	0.5	0.6	0.9
1,2-Dichloropropane	N.D.	N.D.	1	4.62	0	0	<2.3	<2.3	<2.3
Trichloroethylene	N.D.	N.D.	1	5.37	0.916	0.159	0.3	0.7	0.8
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
1,1,2-Trichloroethane	N.D.	N.D.	1	5.46	0	0	<2.7	<2.7	<2.7
Toluene	**8.4**	**31.8**	1	3.77	0.996	0.726	11	21	54
1,2-Dibromoethane	N.D.	N.D.	1	7.68	0	0	NA	NA	NA
Tetrachloroethylene	*0.3*	*1.7*	1	6.78	0.945	0.779	1.4	2.4	4.1
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	<2.3	<2.3	<2.3
Ethylbenzene	*0.3*	*1.5*	1	4.34	0.994	0.601	1.5	2.4	7.4
p/m-Xylene (see note)	*0.5*	*2.0*	1	4.34	1	0.532	3.8	6.9	21
Styrene	*0.4*	*1.5*	1	4.26	0.994	0.584	0.6	1.1	1.4
o-Xylene	*0.3*	*1.2*	1	4.34	0.992	0.575	1.9	2.7	7.6
1,1,2,2-Tetrachloroethane	N.D.	N.D.	1	6.87	0.521	0.071	<3.4	<3.4	<3.4
1,3,5-Trimethylbenzene	N.D.	N.D.	1	4.92	0.933	0.163	NA	NA	NA
1,2,4-Trimethylbenzene	N.D.	N.D.	1	4.92	0.997	0.344	NA	NA	NA
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.6
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.7
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30.1	0	0	0.5	0.9	1.5
1,2,4-Trichlorobenzene	N.D.	N.D.	10	74.2	0	0	<0.25	<0.25	3.4
HexachloroButadiene	N.D.	N.D.	10	107	0	0	<0.25	<0.25	4.6

[1]Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.

Instrument: HAPSITE Smart Plus GC/MS	check
N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Li	Last Calibration: 9/19/11

Peak Fit=agreement w/ spectral database; Peak Purity=interference from co-eluting compounds. Fit >0.5 likely, >0.85 very

COMMENTS: Chloroethane appears to be a system/bag contaminant. Benzene is slightly elevated but not of immediate concern.

MassDEP Field Assessment and Support Team (FAST)				INDOOR AIR DATA				RTN:		
City or Town:	Boston		Address:	Hilton - 40 Dalton Street					Location:	
Date Sampled:	3/13/12	Time:	11:45 PM	Field ID:	14th flr	Collector	Dame		14th floor	
Date Analyzed:	3/14/12	Time:	1:35 AM	Lab ID:	002a	Analyst:	Fitzgerald			

Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Typical Indoor Conc µg/m³		
	ppbV	µg/m³	ppbV	µg/m³			50th%	75th%	90th%
Vinyl Chloride	N.D.	N.D.	1	2.58	0.579	0.014	<1	<1	<1
Bromomethane	N.D.	N.D.	5	22.3	0.487	0.005	<0.25	<0.25	0.6
Chloroethane	*4.8*	*12.6*	5	13.2	0.95	0.116	NA	NA	NA
Trichloromonofluoromethane	N.D.	N.D.	5	35.0	0.996	0.174	NA	NA	NA
1,1-Dichloroethene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Methylene Chloride	N.D.	N.D.	1	3.47	0	0	1.4	3.7	11
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	5	38.3	0.643	0.106	NA	NA	NA
1,1-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Chloroform	N.D.	N.D.	1	4.88	0.981	0.402	1.9	2.6	3
1,2-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
1,1,1-Trichloroethane	N.D.	N.D.	1	5.46	0	0	0.5	1.1	3
Benzene	**5.3**	**16.8**	1	3.2	0.992	0.661	2.3	3.6	11
Carbon Tetrachloride	N.D.	N.D.	1	6.29	0	0	0.5	0.6	0.9
1,2-Dichloropropane	N.D.	N.D.	1	4.62	0	0	<2.3	<2.3	<2.3
Trichloroethylene	N.D.	N.D.	1	5.37	0	0	0.3	0.7	0.8
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0.602	0.006	<2.3	<2.3	<2.3
1,1,2-Trichloroethane	N.D.	N.D.	1	5.46	0	0	<2.7	<2.7	<2.7
Toluene	**4.2**	**15.9**	1	3.77	0.996	0.727	11	21	54
1,2-Dibromoethane	N.D.	N.D.	1	7.68	0	0	NA	NA	NA
Tetrachloroethylene	*0.2*	*1.4*	1	6.78	0.933	0.734	1.4	2.4	4.1
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	<2.3	<2.3	<2.3
Ethylbenzene	*0.2*	*1.1*	1	4.34	0.998	0.584	1.5	2.4	7.4
p/m-Xylene (see note)	*0.2*	*1.1*	1	4.34	1	0.537	3.8	6.9	21
Styrene	N.D.	N.D.	1	4.26	0.996	0.566	0.6	1.1	1.4
o-Xylene	N.D.	N.D.	1	4.34	0.995	0.535	1.9	2.7	7.6
1,1,2,2-Tetrachloroethane	N.D.	N.D.	1	6.87	0	0	<3.4	<3.4	<3.4
1,3,5-Trimethylbenzene	N.D.	N.D.	1	4.92	0.962	0.344	NA	NA	NA
1,2,4-Trimethylbenzene	N.D.	N.D.	1	4.92	0.997	0.308	NA	NA	NA
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.6
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.7
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30.1	0	0	0.5	0.9	1.5
1,2,4-Trichlorobenzene	N.D.	N.D.	10	74.2	0	0	<0.25	<0.25	3.4
HexachloroButadiene	N.D.	N.D.	10	107	0	0	<0.25	<0.25	4.6

[1]Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.

Instrument: HAPSITE Smart Plus GC/MS | Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal

N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Lim | Last Calibration: 9/19/11

Peak Fit=agreement w/ spectral database; Peak Purity=interference from co-eluting compounds. Fit >0.5 likely, >0.85 very

COMMENTS: Benzene slightly elevated but not of immediate concern

9/11

MassDEP Field Assessment and Support Team (FAST)			AIR SCREENING DATA		RTN:			
City or Town:	Boston	Address:	Hilton - 40 Dalton Street				Location:	
Date Sampled:	3/13/12	Time:	11:35 PM	Field ID:	24th flr	Collector	Dame	24th floor
Date Analyzed:	3/14/12	Time:	1:01 AM	Lab ID:	001a	Analyst:	Fitzgerald	

Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Typical Indoor Conc µg/m³		
	ppbV	µg/m³	ppbV	µg/m³			50th%	75th%	90th%
Vinyl Chloride	N.D.	N.D.	1	2.58	0	0	<1	<1	<1
Bromomethane	N.D.	N.D.	5	22.3	0.962	0.007	<0.25	<0.25	0.6
Chloroethane	N.D.	N.D.	5	13.2	0.939	0.043	NA	NA	NA
Trichloromonofluoromethane	N.D.	N.D.	5	35.0	0	0	NA	NA	NA
1,1-Dichloroethene	N.D.	N.D.	1	3.97	0.943	0.005	<2	<2	<2
Methylene Chloride	*0.3*	*1.1*	1	3.47	0.927	0.334	1.4	3.7	11
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	5	38.3	0	0	NA	NA	NA
1,1-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Chloroform	*0.2*	*1.2*	1	4.88	0.991	0.487	1.9	2.6	3
1,2-Dichloroethane	N.D.	N.D.	1	4.05	0.546	0.008	<2	<2	<2
1,1,1-Trichloroethane	N.D.	N.D.	1	5.46	0	0	0.5	1.1	3
Benzene	**6.2**	19.8	1	3.2	0.99	0.65	2.3	3.6	11
Carbon Tetrachloride	N.D.	N.D.	1	6.29	0	0	0.5	0.6	0.9
1,2-Dichloropropane	N.D.	N.D.	1	4.62	0	0	<2.3	<2.3	<2.3
Trichloroethylene	N.D.	N.D.	1	5.37	0	0	0.3	0.7	0.8
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0.659	0.007	<2.3	<2.3	<2.3
1,1,2-Trichloroethane	N.D.	N.D.	1	5.46	0	0	<2.7	<2.7	<2.7
Toluene	**4.0**	**14.9**	1	3.77	0.995	0.722	11	21	54
1,2-Dibromoethane	N.D.	N.D.	1	7.68	0	0	NA	NA	NA
Tetrachloroethylene	*0.2*	*1.6*	1	6.78	0.925	0.711	1.4	2.4	4.1
Chlorobenzene	N.D.	N.D.	1	4.6	0	0	<2.3	<2.3	<2.3
Ethylbenzene	*0.2*	*1.0*	1	4.34	1	0.595	1.5	2.4	7.4
p/m-Xylene (see note)	*0.3*	*1.1*	1	4.34	1	0.553	3.8	6.9	21
Styrene	*0.3*	*1.2*	1	4.26	0.998	0.514	0.6	1.1	1.4
o-Xylene	N.D.	N.D.	1	4.34	0.993	0.528	1.9	2.7	7.6
1,1,2,2-Tetrachloroethane	N.D.	N.D.	1	6.87	0.559	0.073	<3.4	<3.4	<3.4
1,3,5-Trimethylbenzene	N.D.	N.D.	1	4.92	0.957	0.293	NA	NA	NA
1,2,4-Trimethylbenzene	N.D.	N.D.	1	4.92	0.995	0.289	NA	NA	NA
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.6
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.7
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30.1	0	0	0.5	0.9	1.5
1,2,4-Trichlorobenzene	N.D.	N.D.	10	74.2	0	0	<0.25	<0.25	3.4
HexachloroButadiene	N.D.	N.D.	10	107	0	0	<0.25	<0.25	4.6

[1]Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.

Instrument: HAPSITE Smart Plus GC/MS | check

N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Li | Last Calibration: 9/19/11

Peak Fit=agreement w/ spectral database; Peak Purity=interference from co-eluting compounds. Fit >0.5 likely, >0.85 very

COMMENTS: Benzene is slightly elevated but not of immediate concern

9/11

MassDEP Field Assessment and Support Team (FAST)				INDOOR AIR DATA				RTN:		
City or Town:	Boston		Address:	Boston Fire Dept Fire House				Location:		
Date Sampled:	3/13/12	Time:	11:45 PM	Field ID:	BFD-1	Collector	Simenas	2nd floor, SE corner		
Date Analyzed:	3/13/12	Time:	11:58 PM	Lab ID:	002	Analyst:	Fitzgerald			

Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Typical Indoor Conc µg/m³		
	ppbV	µg/m³	ppbV	µg/m³			50th%	75th%	90th%
Vinyl Chloride	N.D.	N.D.	1	2.58	0	0	<1	<1	<1
Bromomethane	N.D.	N.D.	5	22.3	0	0	<0.25	<0.25	0.6
Chloroethane	**51.6**	**136.1**	5	13.2	0.868	0.269	NA	NA	NA
Trichloromonofluoromethane	N.D.	N.D.	5	35.0	0	0	NA	NA	NA
1,1-Dichloroethene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Methylene Chloride	N.D.	N.D.	1	3.47	0.93	0.16	1.4	3.7	11
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	5	38.3	0	0	NA	NA	NA
1,1-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Chloroform	N.D.	N.D.	1	4.88	0.882	0.163	1.9	2.6	3
1,2-Dichloroethane	N.D.	N.D.	1	4.05	0.826	0.004	<2	<2	<2
1,1,1-Trichloroethane	N.D.	N.D.	1	5.46	0	0	0.5	1.1	3
Benzene	*0.6*	*2.0*	1	3.2	0.991	0.552	2.3	3.6	11
Carbon Tetrachloride	N.D.	N.D.	1	6.29	0.962	0.132	0.5	0.6	0.9
1,2-Dichloropropane	N.D.	N.D.	1	4.62	0	0	<2.3	<2.3	<2.3
Trichloroethylene	N.D.	N.D.	1	5.37	0	0	0.3	0.7	0.8
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
1,1,2-Trichloroethane	N.D.	N.D.	1	5.46	0	0	<2.7	<2.7	<2.7
Toluene	*0.7*	*2.5*	1	3.77	0.991	0.672	11	21	54
1,2-Dibromoethane	N.D.	N.D.	1	7.68	0	0	NA	NA	NA
Tetrachloroethylene	N.D.	N.D.	1	6.78	0.917	0.518	1.4	2.4	4.1
Chlorobenzene	N.D.	N.D.	1	4.6	0.795	0.042	<2.3	<2.3	<2.3
Ethylbenzene	N.D.	N.D.	1	4.34	0.99	0.4	1.5	2.4	7.4
p/m-Xylene (see note)	N.D.	N.D.	1	4.34	0.999	0.529	3.8	6.9	21
Styrene	N.D.	N.D.	1	4.26	0.994	0.299	0.6	1.1	1.4
o-Xylene	N.D.	N.D.	1	4.34	0.936	0.409	1.9	2.7	7.6
1,1,2,2-Tetrachloroethane	N.D.	N.D.	1	6.87	0.672	0.076	<3.4	<3.4	<3.4
1,3,5-Trimethylbenzene	N.D.	N.D.	1	4.92	0.99	0.176	NA	NA	NA
1,2,4-Trimethylbenzene	N.D.	N.D.	1	4.92	0.998	0.391	NA	NA	NA
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.6
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.7
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30.1	0	0	0.5	0.9	1.5
1,2,4-Trichlorobenzene	N.D.	N.D.	10	74.2	0	0	<0.25	<0.25	3.4
HexachloroButadiene	N.D.	N.D.	10	107	0	0	<0.25	<0.25	4.6

[1]Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.

Instrument: HAPSITE Smart Plus GC/MS | Quality Control: 3-6 point cal w/ %RSD<30, Internal Stds, daily blank, daily cal

N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Lim | Last Calibration: 9/19/11

Peak Fit=agreement w/ spectral database; Peak Purity=interference from co-eluting compounds. Fit >0.5 likely, >0.85 very

COMMENTS: Chloroethane likely a bag/system contaminant

MassDEP Field Assessment and Support Team (FAST)				AIR SCREENING DATA		RTN:			
City or Town:	Boston		Address:	Garage - Scotia St				Location:	
Date Sampled:	3/14/12	Time:	12:30 AM	Field ID:	Garage	Collector	Dame	3rd Level	
Date Analyzed:	3/14/14	Time:	2:07 AM	Lab ID:	003a	Analyst:	Fitzgerald		

Method Analytes	Concentration		Reporting Limit		Peak Fit	Peak Purity	Typical Indoor Conc µg/m³		
	ppbV	µg/m³	ppbV	µg/m³			50th%	75th%	90th%
Vinyl Chloride	N.D.	N.D.	1	2.58	0	0	<1	<1	<1
Bromomethane	N.D.	N.D.	5	22.3	0.932	0.024	<0.25	<0.25	0.6
Chloroethane	**5.1**	**13.4**	5	13.2	0.896	0.127	NA	NA	NA
Trichloromonofluoromethane	N.D.	N.D.	5	35.0	0	0	NA	NA	NA
1,1-Dichloroethene	N.D.	N.D.	1	3.97	0.606	0.015	<2	<2	<2
Methylene Chloride	N.D.	N.D.	1	3.47	0	0	1.4	3.7	11
1,1,2-Trichlorotrifluoroethane	N.D.	N.D.	5	38.3	0	0	NA	NA	NA
1,1-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
Cis 1,2-Dichloroethylene	N.D.	N.D.	1	3.97	0	0	<2	<2	<2
Chloroform	N.D.	N.D.	1	4.88	0.882	0.106	1.9	2.6	3
1,2-Dichloroethane	N.D.	N.D.	1	4.05	0	0	<2	<2	<2
1,1,1-Trichloroethane	N.D.	N.D.	1	5.46	0.658	0.013	0.5	1.1	3
Benzene	*0.5*	*1.5*	1	3.2	0.987	0.505	2.3	3.6	11
Carbon Tetrachloride	N.D.	N.D.	1	6.29	0.967	0.217	0.5	0.6	0.9
1,2-Dichloropropane	N.D.	N.D.	1	4.62	0	0	<2.3	<2.3	<2.3
Trichloroethylene	N.D.	N.D.	1	5.37	0	0	0.3	0.7	0.8
cis-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
trans-1,3-Dichloropropene	N.D.	N.D.	1	4.54	0	0	<2.3	<2.3	<2.3
1,1,2-Trichloroethane	N.D.	N.D.	1	5.46	0	0	<2.7	<2.7	<2.7
Toluene	*0.6*	*2.3*	1	3.77	0.996	0.698	11	21	54
1,2-Dibromoethane	N.D.	N.D.	1	7.68	0	0	NA	NA	NA
Tetrachloroethylene	N.D.	N.D.	1	6.78	0	0	1.4	2.4	4.1
Chlorobenzene	N.D.	N.D.	1	4.6	0.873	0	<2.3	<2.3	<2.3
Ethylbenzene	N.D.	N.D.	1	4.34	0.986	0.405	1.5	2.4	7.4
p/m-Xylene (see note)	N.D.	N.D.	1	4.34	0.999	0.501	3.8	6.9	21
Styrene	N.D.	N.D.	1	4.26	0.999	0.519	0.6	1.1	1.4
o-Xylene	N.D.	N.D.	1	4.34	0.999	0.317	1.9	2.7	7.6
1,1,2,2-Tetrachloroethane	N.D.	N.D.	1	6.87	0	0	<3.4	<3.4	<3.4
1,3,5-Trimethylbenzene	N.D.	N.D.	1	4.92	0.995	0.288	NA	NA	NA
1,2,4-Trimethylbenzene	N.D.	N.D.	1	4.92	0.995	0.288	NA	NA	NA
1,3-Dichlorobenzene (meta)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.6
1,2-Dichlorobenzene (ortho)	N.D.	N.D.	5	30.1	0	0	<0.25	<0.25	0.7
1,4-Dichlorobenzene (para)	N.D.	N.D.	5	30.1	0	0	0.5	0.9	1.5
1,2,4-Trichlorobenzene	N.D.	N.D.	10	74.2	0	0	<0.25	<0.25	3.4
HexachloroButadiene	N.D.	N.D.	10	107	0	0	<0.25	<0.25	4.6

[1]Concentration for combined p- & m- Xylenes could be up to twice the listed value, due to co-elution conditions.

Instrument: HAPSITE Smart Plus GC/MS | check

N.D. = Not Detected Italicized = estimated "J" value (concentration is less than Reporting Li | Last Calibration: 9/19/11

Peak Fit=agreement w/ spectral database; Peak Purity=interference from co-eluting compounds. Fit >0.5 likely, >0.85 very

COMMENTS: