

**EMCA Site 360025
Project Review**

**New York State Department of Environmental Conservation
New York State Department of Health
Rohm and Haas Company Inc.
Cablevision Systems, Inc.**

11 Penn Plaza, New York, New York

AGENDA

- 1. Summary of Recent Groundwater Results**
- 2. Summary of Soil Gas & Indoor Air Results**
 - a. 1992 ENVIRON Indoor Air Sampling**
 - b. 1999-2000 URS Soil Gas Sampling**
 - c. 2000 NYSDOH Indoor Air Sampling**
 - d. 2007 EnviroScience Indoor Air Sampling**
- 3. Discussion of Future Sampling/Activities**
- 4. Action Items**

Recent Groundwater Results



MW-04	05/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	ND	ND
Chlorotrifluoroethene (Freon-1113)	ND	1.0 J

MW-03	05/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	5800	0.5 J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	78 J	4.0 J
Chlorotrifluoroethene (Freon-1113)	ND	13 J

FAYETTE AVENUE

OGDEN AVENUE

MW-07	06/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	5400	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	68 J	0.9 J
Chlorotrifluoroethene (Freon-1113)	ND	92

MW-02	05/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	880	890 J
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	40	72
Chlorotrifluoroethene (Freon-1113)	ND	120 J

MW-06	06/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	220	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	8.8 J	ND
Chlorotrifluoroethene (Freon-1113)	ND	8.0 J

GZ-06	05/03	2/08
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	100	ND
1,2-Dichloro-1,1,2-trifluoroethane (Freon-123A)	20	ND
Chlorotrifluoroethene (Freon-1113)	ND	ND

CENTER AVENUE

Legend

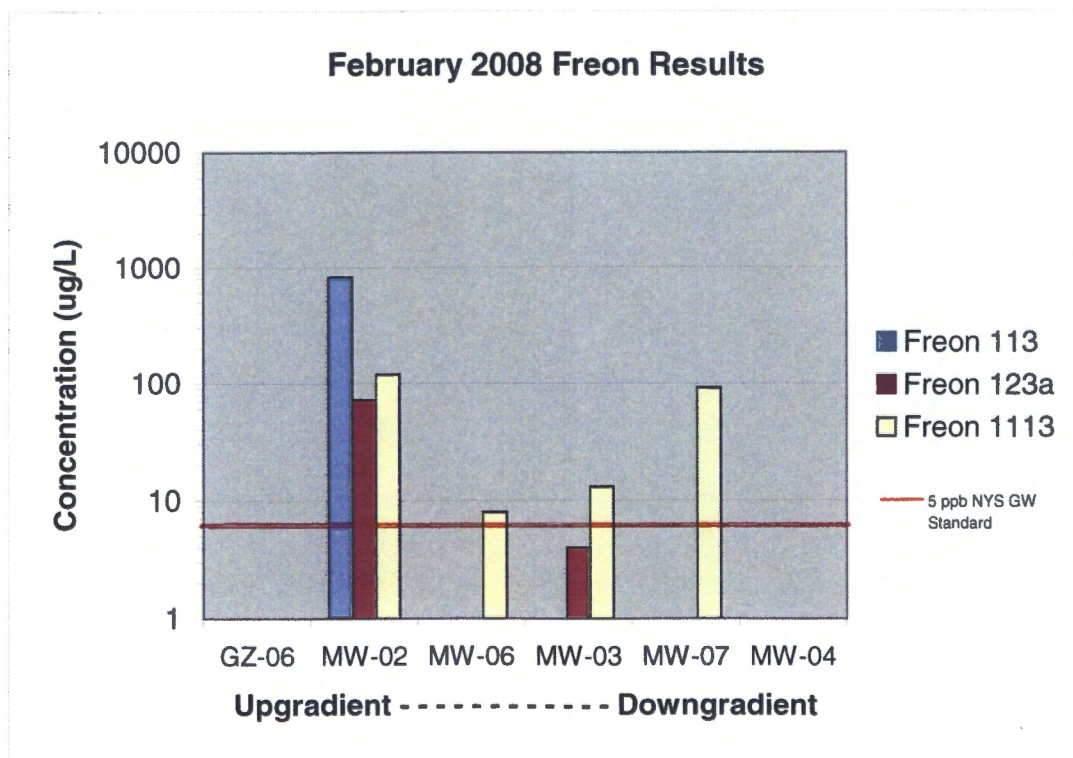
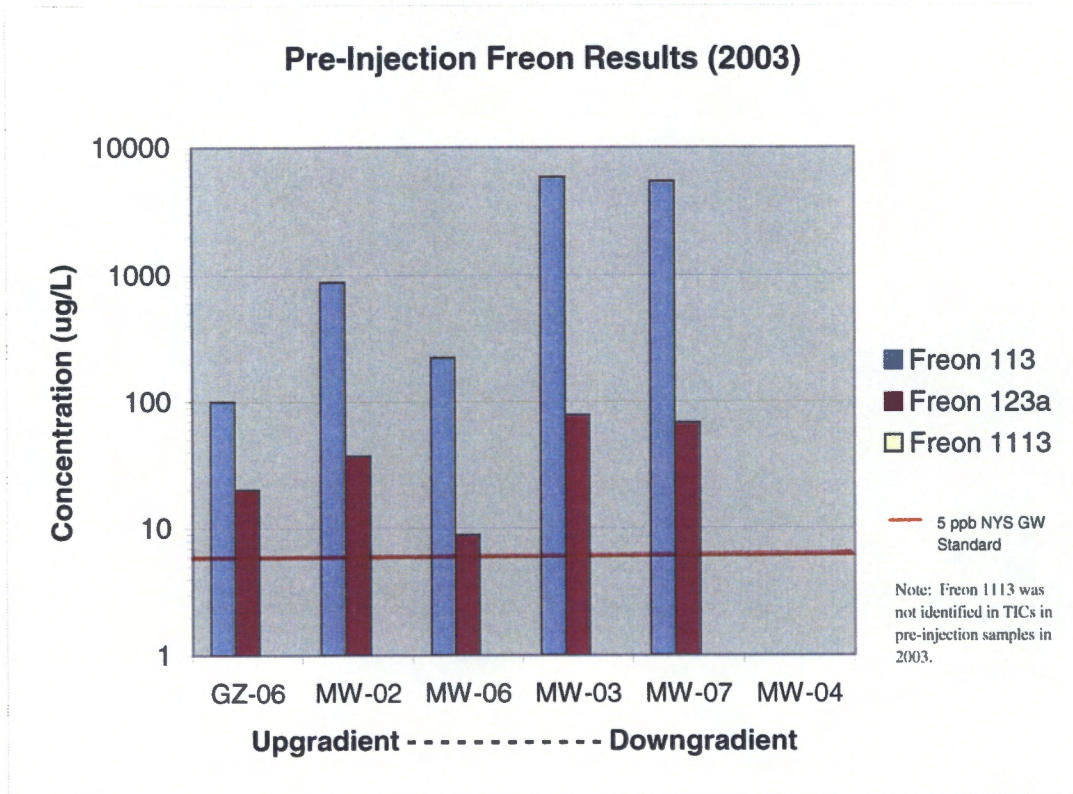
- Existing Monitoring Well Location
- Concentration Exceeds NYSDEC TOGS (1.1.1) Class GA Standards
- Generalized Groundwater Flow Direction
- All Analytical Results are Reported in UG/L
- 5/03 - Pre-Pilot Injection Sampling Dates
- 2/08 - Post-Supplemental Injection Sampling Dates



FORMER EMCA SITE
SUMMARY OF FREON DETECTIONS IN GROUNDWATER
PRE & POST REMEDIATION

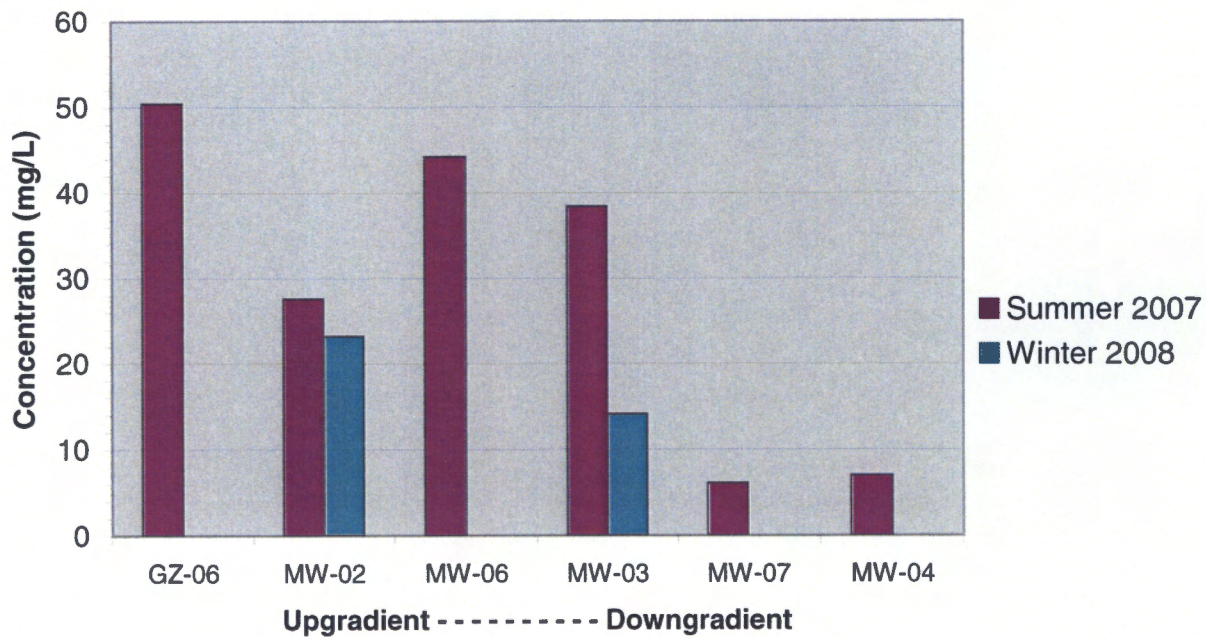
FIGURE 3

FIGURE 11
FORMER EMCA SITE - FREON CONCENTRATIONS
PRE-INJECTION & CURRENT RESULTS

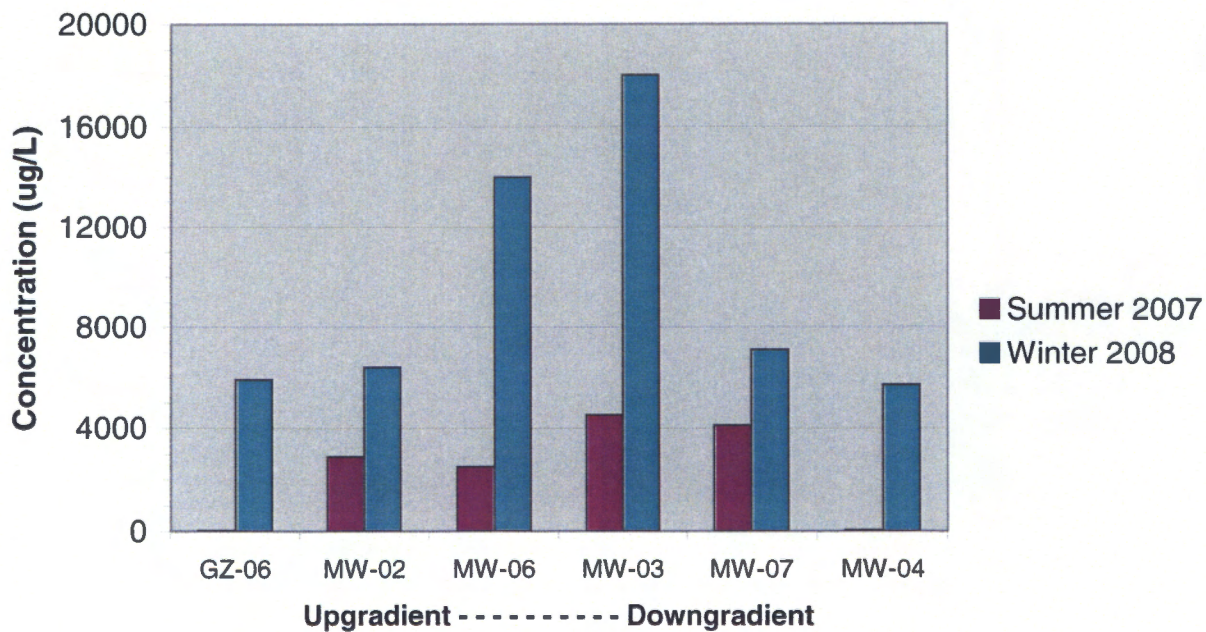


**FORMER EMCA SITE - SULFATE AND METHANE CONCENTRATIONS
PRE- & POST SUPPLEMENTAL INJECTION**

Sulfate (Pre- & Post-Supplemental Injection)








Methane (Pre- & Post-Supplemental Injection)





Legend

-  Monitoring Well Location
-  Stream Gauge Location
-  Groundwater Flow Direction
-  Former EMCA Site Boundary (Approximate)
-  Groundwater Elevation Contour

93.2

MW-05, 93.06

Location ID Groundwater Elevation
(based upon URS survey datum)

NOTES:
(1) NM - Not Measured



N:\1172730.000\0\B\GIS\2001\welev.apr 07/31/07 GROUNDWATER ELEVATION CONTOURS 10/9/2007



GROUNDWATER ELEVATION CONTOUR
MAP (JULY 31, 2007)

FIGURE 2

Soil Gas & Indoor Air Results

1992 ENVIRON Indoor Air Sampling

**Indoor Air Sampling at
TCI Cable of Westchester, Inc.
Mamaroneck, New York**

**Prepared for
TCI Cable of Westchester, Inc.
Mamaroneck, New York**

**Prepared by
ENVIRON Corporation
Princeton, New Jersey**

September 1992

TABLE 1
Target Compounds for Indoor Air Sampling Analysis

Acetone
Benzene
Butanone, 2-
Chloroethane
Chloroform
Dichloroethane, 1,1-
Dichloroethene, cis-1,2-
Dichloroethene, trans-1,2-
Ethylbenzene
Freon 113
Methylene chloride
Tetrachloroethane, 1,1,2,2-
Tetrachloroethylene
Trichloroethane, 1,1,1-
Trichloroethylene
Toluene

2860A:PAA02EAF.W51

TABLE 2. Summary of Results of Indoor Air Sampling
TCI Cable, Mamuroneck, NY

COMPOUND	Detection Limit (ppb)	1st Floor				2nd Floor				Average Indoor Conc. (ppb)	Outdoor		Average Outdoor Conc. (ppb)
		8192-5 Outside Elevator (ppb)	8192-6 Head End Room (ppb)	8192-7 Men's Room (ppb)	8192-8 Utility Room (ppb)	8192-3 Lunch Room (ppb)	8192-4 Human Resources (ppb)	8192-9 Marketing Office (ppb)	8192-10 Hallway Near Elev. (ppb)		8192-1 Lower Roof (ppb)	8192-2 Upper Roof (ppb)	
Acetone	4.20	16.0	19.0	28.0	31.0	30.0	25.0	23.0	22.0	24.25	14.0	15.0	14.50
Benzene	1.6	1.9	3.7	3.1	3.0	2.8	2.6	2.0	2.1	2.65	0.96TR	0.91TR	0.94
Butanone, 2-	3.4	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Chloroethane	1.9	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Chloroform	1	ND	ND	0.63TR	0.60TR	ND	ND	ND	ND	0.15	ND	ND	0.00
Dichloroethane, 1,1-	1.2	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Dichloroethene, cis-1,2-	1.3	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Dichloroethene, trans-1,2-	1.3	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Ethylbenzene	1.2	1.9	4.5	3.2	3.1	2.4	2.1	0.65TR	2.4	2.53	0.65TR	0.63TR	0.64
Freon 113	0.66	1.6	12.0	3.1	3.6	1.7	1.6	1.9	2.0	3.44	0.66	0.81TR	0.71
Methylene chloride	1.5	1.7	2.6	2.5	3.5	2.3	2.1	2.5	2.5	2.46	1.1TR	1.4TR	1.25
Tetrachloroethane, 1,1,2,2-	0.74	ND	ND	ND	ND	ND	ND	ND	ND	0.00	ND	ND	0.00
Tetrachloroethylene	0.75	0.84	1.1	1.1	1.1	0.88	1	1.1	1.2	1.04	0.42TR	0.32TR	0.37
Trichloroethane, 1,1,1-	0.93	5.1	7.3	10	6.2	5.7	5.2	8.5	7.8	6.98	1.1	1.21R	1.15
Trichloroethylene	0.94	0.91TR	0.96	3.2	5	3.1	2.8	2.2	2.3	2.56	0.77TR	ND	0.77
Toluene	1.3	13.0	24.0	24.0	31.0	27.0	21.0	19.0	17.0	22.0	6.0	5.6	5.80

ppb - parts per billion.
TR - Trace level-below indicated detection limit.
ND - Not detected.

2860A:PAA02EAF.WS1

V. CONCLUSIONS.

The indoor air sampling results do not indicate any evidence of chemicals previously identified in the soil and ground water beneath the TCI Cable building migrating into the indoor air of the building. Of the 16 target compounds, nine were detected at low levels and seven were not detected with detection limits in the 1-4 ppb range. The concentrations of the nine chemicals detected in indoor air were slightly higher than the outdoor air, probably due to air recycling. The chemicals identified in the indoor air are common indoor air contaminants and are commonly present in the environment. Other possible sources of these chemicals include routine use within the building, such as in cleaning fluids and spray propellants.

A comparison of the indoor air sampling results to specific reference levels showed that all chemicals were well below the acceptable Ambient Air Quality guidelines proposed by the State of New York, and are at least 300 times below the occupational OSHA permissible exposure limit (PEL) mandated by OSHA.

Based on the indoor air sampling results, there is no evidence to suggest that the levels of chemicals detected would produce any adverse health effects to the occupants of the TCI Cable building.

2860A:PAA02EAF.W51

1999-2000 URS Soil Gas Sampling

REMEDIAL INVESTIGATION REPORT

**FORMER EMCA SITE
SITE No. 360025
MAMARONECK, NEW YORK**

**Prepared For:
ROHM AND HAAS COMPANY**

FINAL DRAFT

**Prepared by:
URS CORPORATION**

DECEMBER 20, 2000

3.1.2 Analytical Soil Gas Sampling

URS obtained soil gas (SUMMA canister) samples for subsequent laboratory analysis from location SG-03,SG-05, SG-06 and SG-07. In addition, an ambient air sample was collected for laboratory analysis near SG-04 during the October 1999 event, and an ambient air sample was collected near SG-07 during the July 2000 event. The samples were collected in accordance with the work plan, except for the following deviations:

- The collection rate used for obtaining soil gas was decreased to 0.2 liter/minute as per NYSDEC request (each SUMMA canister took approximately 30 minutes to fill)
- The collection rate used for obtaining ambient air during the October 1999 event was less than 0.1 liter/minute due to a faulty flow regulator (sample quality was unaffected)
- The samples were analyzed by Air Toxics Ltd. of Folsom, California using Method TO14 protocols.

3.2 Surface Soil Sampling

One grab soil sample was collected from 0 to 6 inches below the existing asphalt and sub-base layers at location SS-01 (Figure 6) using a Geoprobe macro-sampler. In addition, one composite sample was collected from surface soils 0 to 6 inches below turf from the grass area near the corner of Fayette and Ogden Avenues. The soil samples were analyzed for barium, copper, lead, silver, and zinc. Surface soil sample locations are shown in Figure 6 and in Table 2.

3.3 NYSDOH Air Sampling

On July 11, 2000, the NYSDOH collected ambient air samples at two houses near the former EMCA Site (530 Fayette Avenue and 614 Center Avenue) and within the existing Cablevision of Westchester facility located on the site. NYSDEC has provided URS and Rohm and Haas with the Freon 113 results from this sampling effort. These data are provided in Appendix I.

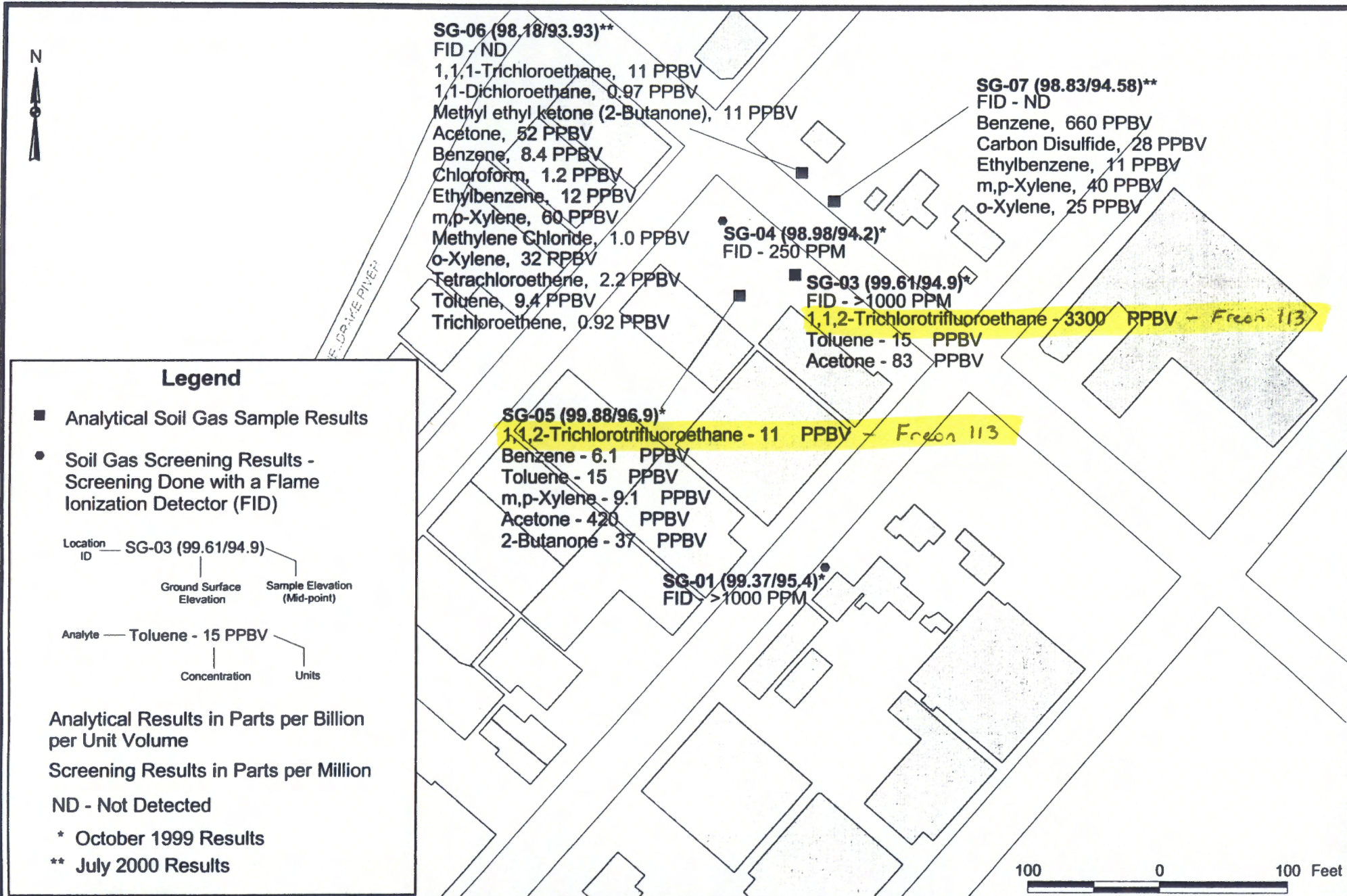
4.0 NATURE AND EXTENT OF CONTAMINATION

This section discusses the analytical data as it pertains to soil gas, surface soil, and groundwater samples collected during the RI. It characterizes the nature and extent of site contaminants, and compares soil and aqueous contaminant concentrations to applicable regulatory criteria.

Groundwater sample analytical results were compared to the NYSDEC Division of Water's "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations," *Technical and Operational Guidance Series (TOGS) 1.1.1*, (NYSDEC 2000). The ambient water quality standards and guidance values are derived from Article 17 of the Environmental Conservation Law and Title 6 of the New York Code of Rules and Regulations (NYCRR) Parts 700-706, "Water Quality Regulations." Standards and guidance values are ambient water quality values that are established to protect the state's waters. Groundwater Class GA criteria were used to evaluate groundwater analytical results.

Soil sample analytical results were compared to the standards, criteria, and guidance values (SCGs) in TAGM 4046 (NYSDEC 1994). As indicated on the attached tables, some of the inorganics (metals) analyzed at this site do not have SCGs. For these inorganic parameters, soil criteria are based upon SCGs, where available, or the range of soil concentrations occurring naturally in Eastern United States soils. For inorganic parameters, the results of the single offsite soil sample, SS-02, is considered representative of site background conditions.

There are no New York State guidance values for soil gas samples, although, as a conservative approach, the detected soil gas concentrations have been compared to ambient air quality standards reported in the DAR-1 (Air Guide-1) Annual and Short Term Guidance Concentrations (NYSDEC 2000). This document provides guideline concentrations for toxic ambient air contaminants that are present in ambient air. As such, since soil gas would be substantially diluted upon release to ambient conditions, this standard is considered an exceptionally stringent criteria for soil gas comparisons.



**TABLE 5
ANALYTICAL AIR SAMPLE RESULTS
FORMER EMCA SITE**

Location ID			AMBIENT AIR	AMBIENT AIR	SG-03	SG-05	SG-06
Sample ID			AMBIENT AIR	AMBIENT AIR	SG-03	SG-05	SG-06
Matrix			Gaseous Effluent	Gaseous Effluent	Gaseous Effluent	Gaseous Effluent	Gaseous Effluent
Depth Interval (ft.)			-	-	4.5-5.0	2.0-4.0	4.0-4.5
Date Sampled			10/04/99	07/11/00	10/05/99	10/04/99	07/11/00
Parameter	Units	Criteria*					
Volatiles							
Acetone	PPBV	11613 (28000)	6.5	7.3	83	420	52
Benzene	PPBV	0.04 (0.13)	1.2 U	0.80 U	15 U	6.1	8.4
Bromodichloromethane	PPBV	0.03 (0.2)	5.0 U	3.2 U	60 U	21 U	3.1 U
Bromoform	PPBV	0.086 (0.9)	5.0 U	3.2 U	60 U	21 U	3.1 U
Bromomethane	PPBV	-	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Methyl ethyl ketone (2-Butanone)	PPBV	334 (1000)	5.0 U	3.2 U	60 U	37	11
Carbon Disulfide	PPBV	222 (700)	5.0 U	3.2 U	60 U	21 U	3.1 U
Carbon Tetrachloride	PPBV	0.105 (0.67)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Chlorobenzene	PPBV	-	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Chloroethane	PPBV	-	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Chloroform	PPBV	0.0086 (0.043)	1.2 U	0.80 U	15 U	5.4 U	1.2
Chloromethane	PPBV	367 (770)	1.2 U	5.0	15 U	5.4 U	0.78 U
Dibromochloromethane	PPBV	0.012 (0.1)	5.0 U	3.2 U	60 U	21 U	3.1 U
1,1-Dichloroethane	PPBV	4.86 (20)	1.2 U	0.80 U	15 U	5.4 U	0.97
1,2-Dichloroethane	PPBV	0.009 (0.038)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
1,1-Dichloroethene	PPBV	-	1.2 U	0.80 U	15 U	5.4 U	0.78 U
cis-1,2-Dichloroethene	PPBV	476 (1900)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
trans-1,2-Dichloroethene	PPBV	476 (1900)	5.0 U	3.2 U	60 U	21 U	3.1 U
1,2-Dichloropropane	PPBV	-	1.2 U	0.80 U	15 U	5.4 U	0.78 U
cis-1,3-Dichloropropene	PPBV	0.054 (0.25)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
trans-1,3-Dichloropropene	PPBV	0.054 (0.25)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Ethylbenzene	PPBV	227 (1000)	1.2 U	0.80 U	15 U	5.4 U	12

Criteria- NYSDEC 2000, DAR-1 (Air Guide-1) Annual and Short Term Guidance Concentrations.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria.

() - New York State Air Guide Concentration in ug/m³.

J - Estimated result

U - Non-Detect

Detection Limits shown are PQL

TABLE 5
ANALYTICAL AIR SAMPLE RESULTS
FORMER EMCA SITE

Location ID			AMBIENT AIR	AMBIENT AIR	SG-03	SG-05	SG-06
Sample ID			AMBIENT AIR	AMBIENT AIR	SG-03	SG-05	SG-06
Matrix			Gaseous Effluent	Gaseous Effluent	Gaseous Effluent	Gaseous Effluent	Gaseous Effluent
Depth Interval (ft.)			-	-	4.5-5.0	2.0-4.0	4.0-4.5
Date Sampled			10/04/99	07/11/00	10/05/99	10/04/99	07/11/00
Parameter	Units	Criteria*					
Volatiles							
2-Hexanone	PPBV	-	5.0 U	3.2 U	60 U	21 U	3.1 U
4-Methyl-2-Pentanone	PPBV	118 (490)	5.0 U	3.2 U	60 U	21 U	3.1 U
Methylene Chloride	PPBV	0.594 (2.1)	1.2 U	0.80 U	15 U	5.4 U	1.0
Styrene	PPBV	231 (1000)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
1,1,2-Tetrachloroethane	PPBV	0.002 (0.017)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Tetrachloroethene	PPBV	0.145 (1.0)	1.2 U	0.80 U	15 U	5.4 U	2.2
1,1,1-Trichloroethane	PPBV	0.081 (0.45)	1.2 U	0.80 U	15 U	5.4 U	11
1,1,2-Trichloroethane	PPBV	0.011 (0.063)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
Trichloroethene	PPBV	0.083 (0.45)	1.2 U	0.80 U	15 U	5.4 U	0.92
1,1,2-Trichlorotrifluoroethane <i>- Freon 113</i>	PPBV	23108 (180000)	1.2 U	0.80 U	3300	11	0.78 U
Toluene	PPBV	104 (400)	1.2 U	0.88	15	15	9.4
Vinyl Acetate	PPBV	55.9 (200)	5.0 U	3.2 U	60 U	21 U	3.1 U
Vinyl Chloride	PPBV	0.008 (0.02)	1.2 U	0.80 U	15 U	5.4 U	0.78 U
m,p-Xylene	PPBV	159 (700)	1.2 U	0.80 U	15 U	9.1	60
o-Xylene	PPBV	159 (700)	1.2 U	0.80 U	15 U	5.4 U	32

Criteria- NYSDEC 2000, DAR-1 (Air Guide-1) Annual and Short Term Guidance Concentrations.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria.

() - New York State Air Guide Concentration in ug/m³.

J - Estimated result

U - Non-Detect

Detection Limits shown are PQL

**TABLE 5
ANALYTICAL AIR SAMPLE RESULTS
FORMER EMCA SITE**

Location ID			SG-07
Sample ID			SG-07
Matrix			Gaseous Effluent
Depth Interval (ft.)			4.0-4.5
Date Sampled			07/11/00
Parameter	Units	Criteria*	
Volatiles			
Acetone	PPBV	11613 (28000)	9.8 U
Benzene	PPBV	0.04 (0.13)	660 J
Bromodichloromethane	PPBV	0.03 (0.2)	9.8 U
Bromoform	PPBV	0.086 (0.9)	9.8 U
Bromomethane	PPBV	-	2.4 U
Methyl ethyl ketone (2-Butanone)	PPBV	334 (1000)	9.8 U
Carbon Disulfide	PPBV	222 (700)	28 J
Carbon Tetrachloride	PPBV	0.105 (0.67)	2.4 U
Chlorobenzene	PPBV	-	2.4 U
Chloroethane	PPBV	-	2.4 U
Chloroform	PPBV	0.0086 (0.043)	2.4 U
Chloromethane	PPBV	367 (770)	2.4 U
Dibromochloromethane	PPBV	0.012 (0.1)	9.8 U
1,1-Dichloroethane	PPBV	4.86 (20)	2.4 U
1,2-Dichloroethane	PPBV	0.009 (0.038)	2.4 U
1,1-Dichloroethene	PPBV	-	2.4 U
cis-1,2-Dichloroethene	PPBV	476 (1900)	2.4 U
trans-1,2-Dichloroethene	PPBV	476 (1900)	9.8 U
1,2-Dichloropropane	PPBV	-	2.4 U
cis-1,3-Dichloropropene	PPBV	0.054 (0.25)	2.4 U
trans-1,3-Dichloropropene	PPBV	0.054 (0.25)	2.4 U
Ethylbenzene	PPBV	227 (1000)	11 J

Criteria- NYSDEC 2000, DAR-1 (Air Guide-1) Annual and Short Term Guidance Concentrations.

Flags assigned during chemistry validation are shown.

 Concentration Exceeds Criteria.

() - New York State Air Guide Concentration in ug/m³.

J - Estimated result

U - Non-Detect

Detection Limits shown are PQL

TABLE 5
ANALYTICAL AIR SAMPLE RESULTS
FORMER EMCA SITE

Location ID			SG-07
Sample ID			SG-07
Matrix			Gaseous Effluent
Depth Interval (ft.)			4.0-4.5
Date Sampled			07/11/00
Parameter	Units	Criteria*	
Volatiles			
2-Hexanone	PPBV	-	9.8 U
4-Methyl-2-Pentanone	PPBV	118 (490)	9.8 U
Methylene Chloride	PPBV	0.594 (2.1)	2.4 U
Styrene	PPBV	231 (1000)	2.4 U
1,1,2,2-Tetrachloroethane	PPBV	0.002 (0.017)	2.4 U
Tetrachloroethene	PPBV	0.145 (1.0)	2.4 U
1,1,1-Trichloroethane	PPBV	0.081 (0.45)	2.4 U
1,1,2-Trichloroethane	PPBV	0.011 (0.063)	2.4 U
Trichloroethene	PPBV	0.083 (0.45)	2.4 U
1,1,2-Trichlorotrifluoroethane	PPBV	23108 (180000)	2.4 U
Toluene	PPBV	104 (400)	2.4 U
Vinyl Acetate	PPBV	55.9 (200)	9.8 U
Vinyl Chloride	PPBV	0.008 (0.02)	2.4 U
m,p-Xylene	PPBV	159 (700)	40 J
o-Xylene	PPBV	159 (700)	25 J

Criteria- NYSDEC 2000, DAR-1 (Air Guide-1) Annual and Short Term Guidance Concentrations.

Flags assigned during chemistry validation are shown.



Concentration Exceeds Criteria.

() - New York State Air Guide Concentration in ug/m³.

J - Estimated result

U - Non-Detect

Detection Limits shown are PQL

Maximum Results from Soil Gas Sampling

Analyte	Maximum Concentration (PPBV)	NYSDOH Matrix 1		NYSDOH Matrix 2	
		$\mu\text{g}/\text{m}^3$	PPBV	$\mu\text{g}/\text{m}^3$	PPBV
1,1,1-Trichloroethane**	11	--	--	<100	<18.33
1,1,2-Trichlorotrifluoroethane (Freon 113)	3300	--	--	--	--
1,1-Dichloroethane	0.97	--	--	--	--
Methyl ethyl ketone (2-Butanone)	37	--	--	--	--
Carbon Disulfide	28	--	--	--	--
Acetone	420	--	--	--	--
Benzene	660	--	--	--	--
Chloroform	1.2	--	--	--	--
Ethylbenzene	12	--	--	--	--
m,p-Xylene	60	--	--	--	--
Methylene Chloride	1	--	--	--	--
o-Xylene	32	--	--	--	--
Tetrachloroethene**	2.2	--	--	<100	<14.74
Toluene	15	--	--	--	--
Trichloroethene*	0.92	<5	<0.93	--	--

Notes:

* Trichloroethene is addressed under the Department of Health Soil Vapor/Indoor Air Matrix 1 for sub-slab samples.

** 1,1,1-Trichloroethane and Tetrachloroethene are addressed under the Department of Health Soil Vapor/Indoor Air Matrix 2 for sub-slab samples.

The results for these three compounds fall under the lowest category of their respective matrix, which calls for no further action.

NYSDOH Matrix 1 Compounds include: Trichloroethene, Carbon Tetrachloride and Vinyl Chloride.

NYSDOH Matrix 2 Compounds include: Tetrachloride, 1,1,1-Trichloroethane, 1,1-Dichloroethene and cis-1,2-Dichloroethene.

2000 NYSDOH Indoor Air Sampling

REMEDIAL INVESTIGATION REPORT

**FORMER EMCA SITE
SITE No. 360025
MAMARONECK, NEW YORK**

**Prepared For:
ROHM AND HAAS COMPANY**

FINAL DRAFT

**Prepared by:
URS CORPORATION**

DECEMBER 20, 2000

3.1.2 Analytical Soil Gas Sampling

URS obtained soil gas (SUMMA canister) samples for subsequent laboratory analysis from location SG-03,SG-05, SG-06 and SG-07. In addition, an ambient air sample was collected for laboratory analysis near SG-04 during the October 1999 event, and an ambient air sample was collected near SG-07 during the July 2000 event. The samples were collected in accordance with the work plan, except for the following deviations:

- The collection rate used for obtaining soil gas was decreased to 0.2 liter/minute as per NYSDEC request (each SUMMA canister took approximately 30 minutes to fill)
- The collection rate used for obtaining ambient air during the October 1999 event was less than 0.1 liter/minute due to a faulty flow regulator (sample quality was unaffected)
- The samples were analyzed by Air Toxics Ltd. of Folsom, California using Method TO14 protocols.

3.2 Surface Soil Sampling

One grab soil sample was collected from 0 to 6 inches below the existing asphalt and sub-base layers at location SS-01 (Figure 6) using a Geoprobe macro-sampler. In addition, one composite sample was collected from surface soils 0 to 6 inches below turf from the grass area near the corner of Fayette and Ogden Avenues. The soil samples were analyzed for barium, copper, lead, silver, and zinc. Surface soil sample locations are shown in Figure 6 and in Table 2.

3.3 NYSDOH Air Sampling

On July 11, 2000, the NYSDOH collected ambient air samples at two houses near the former EMCA Site (530 Fayette Avenue and 614 Center Avenue) and within the existing Cablevision of Westchester facility located on the site. NYSDEC has provided URS and Rohm and Haas with the Freon 113 results from this sampling effort. These data are provided in Appendix I.

FREON 113 CONCENTRATIONS IN AIR - JULY 11, 2000

Former EMCA Site
Mamaroneck, New York

Results are reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

SAMPLE LOCATION	FREON 113 CONCENTRATION
530 Fayette Avenue	
Basement	1.0 [PL] = 0.13 PPBV
First Floor	1.0 [PL]
Outdoor	1.0 [PL]
614 Center Avenue	
Basement	1.0 [PL]
First Floor	1.0 [PL]
Outdoor	1.0 [PL]
Cablevision	
Basement	NA
First Floor	17. = 2.19 PPBV
Outdoor	NS
COMPARISON VALUES	25% - 75% RANGE
US EPA Database¹	
Indoor	0.0 - 0.0
Outdoor	0.5 - 2.5
NYSDOH Database²	
Indoor	<1.0 - <1.0
Outdoor	<1.0 - <1.0

Notes: 1 - The United States Environmental Protection Agency's Volatile Organic Compounds Database (EPA Database) was published in March 1988. This database is a compilation of indoor and outdoor data from studies across the United States.

2 - The New York State Department of Health Database (NYSDOH Database) is a summary of indoor and outdoor air sample results from control homes. The samples were collected and analyzed by the NYSDOH from 1989 through 1996.

< = "less than." The number following a "less than" sign (<) is the lowest level the laboratory test can reliably measure (the detection limit). A "<" before any number means the chemical was NOT detected in that sample.

[PL] = Present, but less than the concentration indicated

NA = Not applicable (i.e., no basement)

NS = Not sampled

2007 EnviroScience Indoor Air Sampling

EnviroScience 2007 Indoor Air Results - Cablevision Facility

Analyte	Units	Cablevision Samples			NYSDOH	EPA
		LOGWH	WIC	Outside	2003 90 th %-tile	2001 90 th %-tile
Dichlorodifluoromethane - Freon 12	µg/m ³	6.9	5.4	2.5	15	16.5
1,2-Dichlorotetrafluoroethane - Freon 114	µg/m ³	ND	3.4	ND	0.5	-
Trichlorofluoromethane - Freon 11	µg/m ³	10	12	4.8	17	18.1
n-Hexane	µg/m ³	16	14	2.5	18	10.2
Cyclohexane	µg/m ³	3.4	3.3	1.4	8.1	-
Carbon Tetrachloride	µg/m ³	ND	ND	0.5	0.8	< 1.3
2,2,4-Trimethylpentane	µg/m ³	1.8	ND	1.0	-	-
Benzene	µg/m ³	1.6	1.3	1.1	15	9.4
n-Heptane	µg/m ³	7.4	5.3	1.6	19	-
Toluene	µg/m ³	87	53	13.0	58	43
Ethylbenzene	µg/m ³	2.7	ND	1.0	7.3	5.7
Xylene (m,p)	µg/m ³	7.8	ND	3.1	-	22.2
Xylene (o)	µg/m ³	3.0	ND	1.0	-	7.9
Xylene (total)	µg/m ³	10	ND	4.2	12	-

Notes:

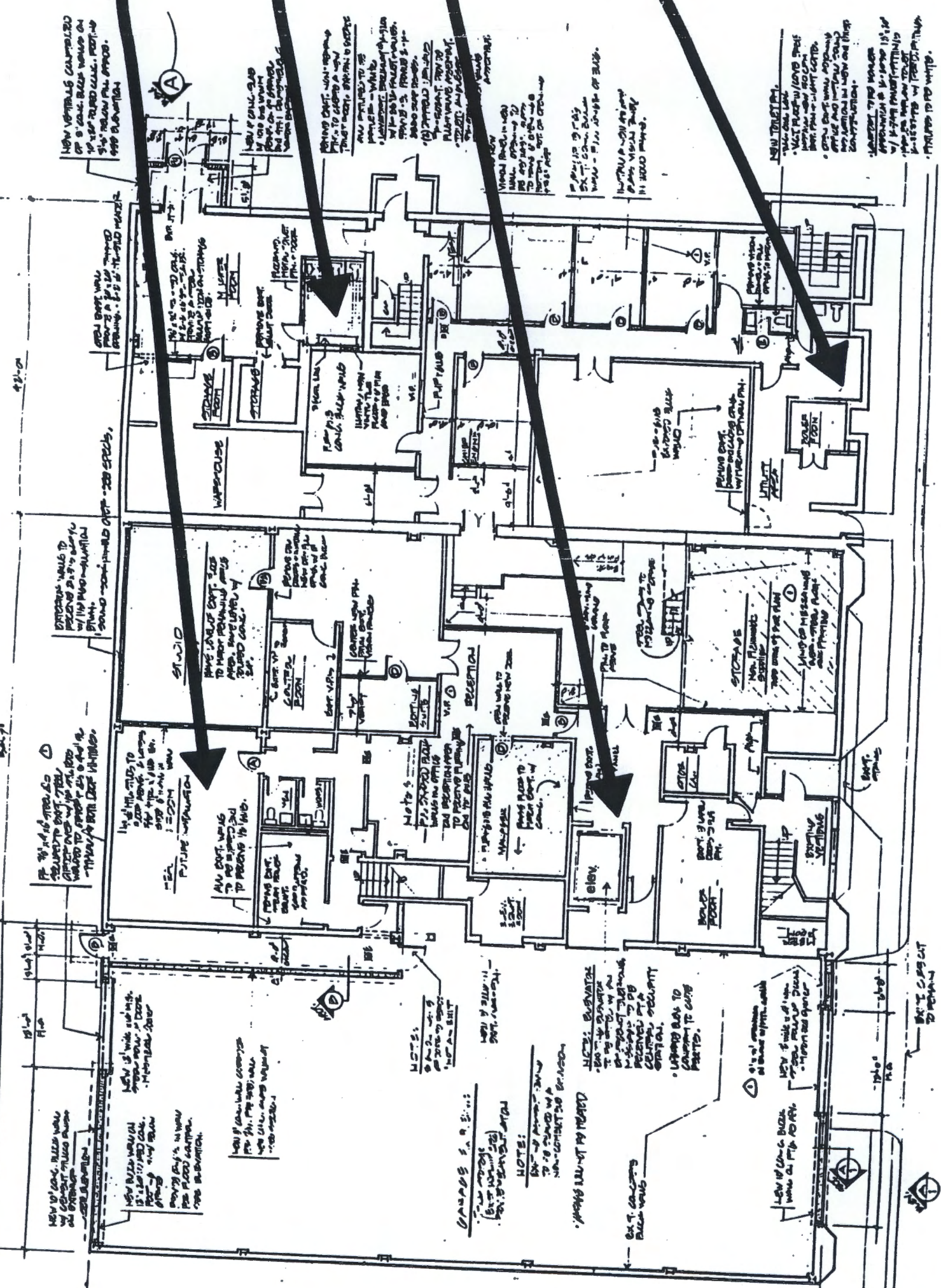
- (a) 43 parameters were included in the TO-15 list
Only those detected are listed
- (b) NYSDOH 2003 90th %-tile: Indoor air results from
Study of volatile organic chemicals in air of fuel
in oil heated homes, 90th percentile
- (c) EPA 2001 90th %-tile: Indoor air results from
Building assessment and survey evaluation
(BASE) database, 90th percentile

HEAD END ROOM
SAMPLE ID. 8192-6

MENS ROOM
SAMPLE ID. 8192-7

OUTSIDE ELEVATOR
SAMPLE ID. 8192-5

UTILITY ROOM
SAMPLE ID. 8192-8



NOTE: Exterior Painted Walls
EXTERIOR WALLS TO BE PLUMBED AND
TO BE PAINTED TO MATCH EXISTING
FINISH TO BE PAINTED.

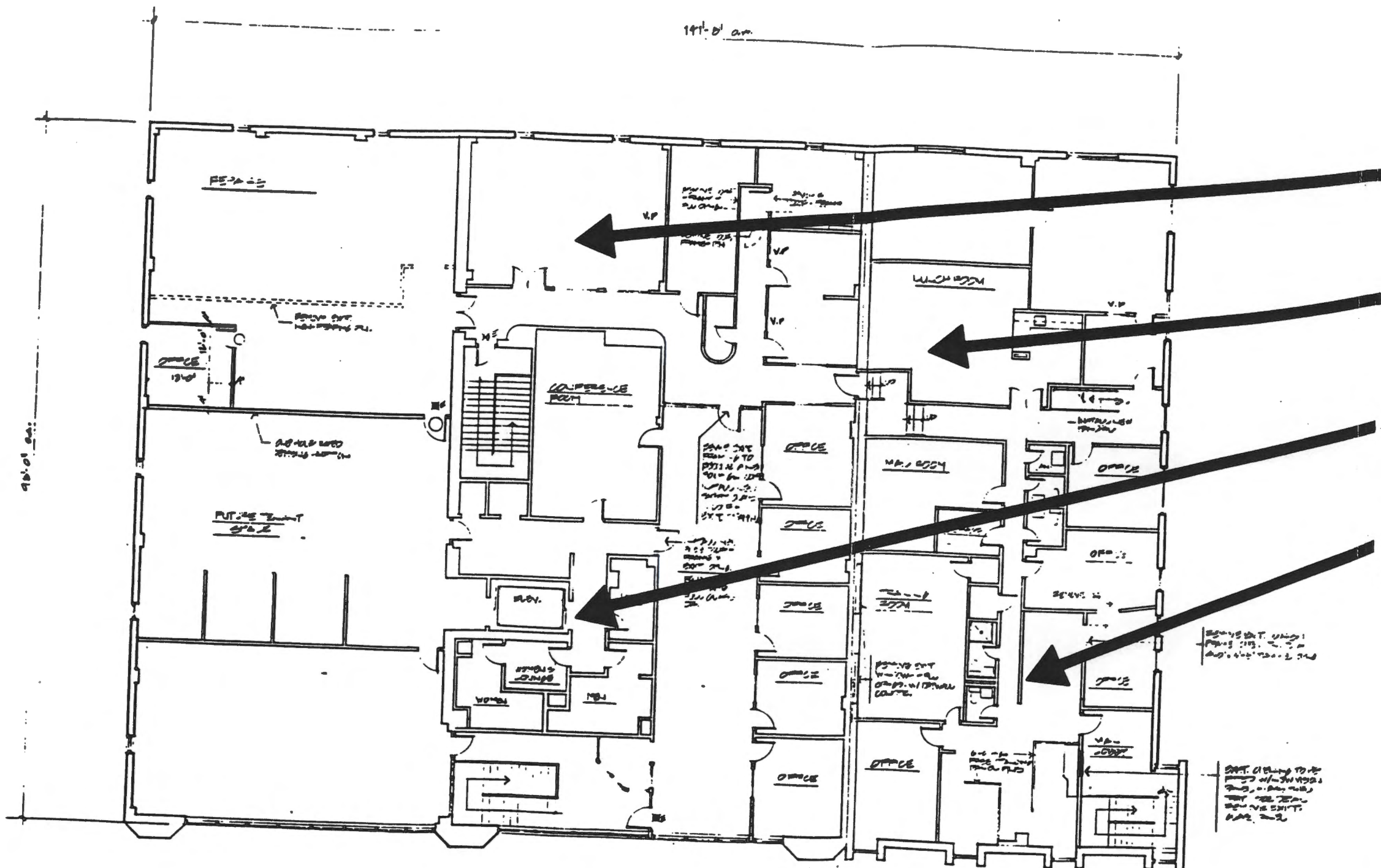
CENTER AVENUE

FIRST FLOOR PLAN
1/8" = 1'-0"

- NEW WALLS TO BE PLUMBED AND PAINTED TO MATCH EXISTING FINISH TO BE PAINTED.
- - - - - EXISTING WALLS TO BE PLUMBED AND PAINTED TO MATCH EXISTING FINISH TO BE PAINTED.
- EXISTING WALLS TO BE PLUMBED AND PAINTED TO MATCH EXISTING FINISH TO BE PAINTED.
- EXISTING WALLS TO BE PLUMBED AND PAINTED TO MATCH EXISTING FINISH TO BE PAINTED.

1/8" = 1'-0"

4
3
2
1



MARKETING OFFICE
SAMPLE ID. 8192-9

LUNCH ROOM
SAMPLE ID. 8192-3

HALLWAY NEAR ELEVATOR
SAMPLE ID. 8192-10

HALLWAY ADJACENT
TO HUMAN RESOURCES
SAMPLE ID. 8192-4

SECOND FLOOR PLAN
V6 1-0

CENTER AVENUE