

~~2001~~
February 16, 2000

Project # 6156

Mr. Henry Nehls-Lowe, MPH
Epidemiologist
Bureau of Public Health
Division of Health
1414 E. Washington Avenue
Room No. 96
Madison, WI 53703-3044

RE.: Results of the Second Air Sampling Event, Webster Middle School, Milwaukee, Wisconsin

Dear Mr. Nehls-Lowe:

Enclosed for your review is the data package for the second air sampling event completed by Sigma Environmental Services, Inc. (Sigma) on December 27, 2000 at Webster Middle School located in Milwaukee, Wisconsin. The purpose of this second air sampling event was to confirm the initial results obtained in July 2000 to evaluate the air quality inside the school building for the presence of chlorinated volatile organic compounds (CVOCs). This phase of the sampling was requested by the Wisconsin Department of Health and Human Services to evaluate the air quality under different seasonal conditions.

The following sections present details of the air sampling and analysis methods, and a summary of the laboratory results. Data included with this letter consists of the following:

- A summary of the air sample laboratory analytical results (Table 1)
- A map of the air sample locations (Attachment A)
- Copies of the laboratory analytical reports from Air Toxics, LTD. (Attachment B)

INVESTIGATION ACTIVITIES

The air monitoring activities were designed to comply with the Wisconsin Department of Health and Human Services request to evaluate indoor air quality, with respect to chlorinated solvent vapors, within Webster Middle School (School).



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Indoor Air Quality Monitoring Air quality monitoring for chlorinated solvent vapors was performed by Sigma in three unfinished ground floor areas of the school. On December 27, 2000, three indoor air samples (MPS 01B, MPS 06B and MPS 09B, see attached figure) from inside the school building were collected to determine if CVOCs impacts identified in groundwater had partitioned into the vapor phase and vertically migrated through the soil infiltrating the school building. All three air samples were collected at the ground level in unpaved, unoccupied ground floor areas of the school (UF6, UF1 and UF44).

Evacuated six liter SUMMA™ Canisters with particulate filters and flow controllers supplied by the project laboratory (Air Toxics Ltd. in Folsom, California) were used to collect the air samples. Each sample was collected over a period of approximately one hour with the air entering the canister through a critical orifice of a flow controller. Flow controllers were calibrated by the project laboratory before shipping the SUMMA™ Canisters to the project site. A vacuum gauge attached to each flow controller was used to monitor the initial and final vacuum during the sampling and to ensure that a minimum vacuum of five inches of mercury was left in the canister prior to ending the sampling. After sample collection the Summa canisters were shipped overnight to Air Toxics Ltd. in Folsom, California for analysis. The samples were analyzed by EPA Method TO-14S with gas chromatography/mass spectrophotometer instrumentation (GC/MS). Limits of detection were < 1 ppbv (parts per billion volume).

It is important to note that these unfinished rooms were primarily used for storage of used furniture, laboratory equipment and lavatory fixtures. One of the unfinished rooms (UF6) which had been used to store several bags, barrels, and buckets of thermoplastic pellets in addition to the used furniture and fixtures, is now completely empty.

Laboratory Analytical Results The project was coordinated with Milwaukee Public Schools representatives and implemented with the help of Wisconsin Division of Public Health officials. Attached Table 1 presents a summary of the laboratory analytical results for all three samples for sampling events completed in both summer and winter of 2000.

A review of the results indicates that most of the chlorinated compounds detected above the method detection limit (MDL) during the summer 2000 sampling event have been detected during the December sampling. Concentrations of several of the compounds appears to have increased slightly by several percent and several others decreased by similar percent.

- Parent compound PCE or TCE was not detected above the MDL in any of the air samples (<0.18 ppbv).

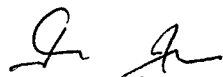
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- Daughter compound Cis-1,2-dichloroethene (DCE) was detected in two samples at concentrations ranging from 3.8 to 38 parts per billion by volume (ppbv). DCE was not detected in one sample (MPS 01B) above the MDL of the analytical method (<0.18 ppb).
- Daughter compound Trans-1,2-Dichloroethene was detected in only one air sample (MPS 09B) at a concentration above the MDL.
- Daughter compound Vinyl chloride was detected in one sample (MPS 09B) collected from unfinished area UF44 at the MDL (0.18 ppbv).
- Daughter compound 1,2-Dichloroethane was not detected above the MDL in any of the air samples (<0.18 ppbv).
- Methylene chloride was detected in all three samples at concentrations ranging from 0.24 to 4.0 ppbv.

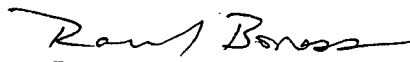
Please do not hesitate to call if you have any questions about this report or comments on the above.

Sincerely,

SIGMA ENVIRONMENTAL SERVICES, INC.



Mafizul Islam, P.E.
Senior Project Engineer



Randy Boness, P.G.
Senior Project Manager

/Attachments

cc(w/ attachments): Mr. Dennis Fisher / Meissner Tierney, et. al.
Mr. Jim Thomas / Village of Whitefish Bay
Ms. Terri Linder / City of Milwaukee Health Department
Mr. Andrew Boettcher / DNR SE Regional Office
Mr. Thomas J. Chojnacki / MPS

TABLE 1

SUMMARY TABLE OF AIR QUALITY ANALYTICAL RESULTS

Air Quality Analytical Results

Daniel Webster Middle School

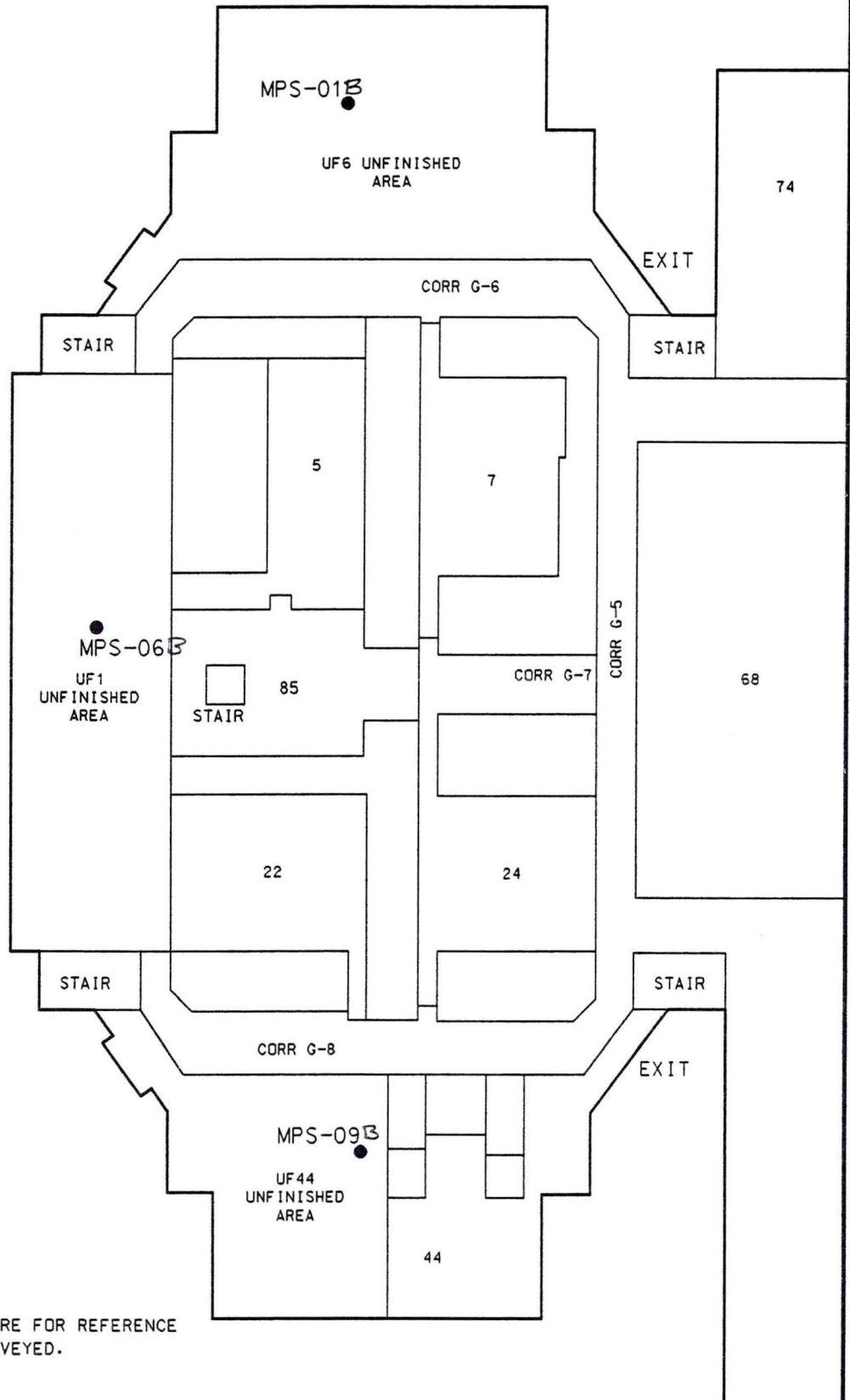
53rd. and Green Tree Road, Milwaukee, Wisconsin

Analyte	Sample Location/Date					
	MPS01	MPS01B	MPS06	MPS06B	MPS09	MPS09B
	07/10/2000	12/27/2000	07/10/2000	12/27/2000	07/10/2000	12/27/2000
Freon 12	2.00	1.00	2.80	1.30	0.84	1.10
Chloromethane	0.38	0.64	0.58	0.58	0.47	0.49
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	<0.18	0.18
Chloroethane	<0.16	<0.18	<0.16	<0.18	0.16	<0.18
Freon 11	0.33	0.21	3.40	1.10	0.46	0.22
Methylene Chloride	0.41	4.00	<0.16	0.34	<0.16	0.24
cis-1,2-Dichloroethene	0.17	<0.18	2.60	3.80	5.00	38.00
1,1,1-Trichloroethane	0.36	<0.18	0.20	<0.18	<0.16	<0.18
Benzene	0.30	0.41	0.46	1.30	0.68	3.50
1,2-Dichloroethane	<0.16	<0.18	<0.16	<0.18	<0.16	<0.18
Trichloroethene	<0.16	<0.18	<0.16	<0.18	<0.16	<0.18
Toluene	2.10	1.30	0.78	3.40	1.60	9.40
Tetrachloroethene	<0.16	<0.18	<0.16	<0.18	<0.16	<0.18
Chlorobenzene	<0.16	<0.18	<0.16	<0.18	<0.16	<0.18
Ethylbenzene	0.47	<0.18	0.24	0.58	<0.16	1.70
Total Xylenes	2.01	1.18	0.72	3.18	2.17	8.90
Styrene	0.26	0.35	0.52	<0.18	<0.16	0.20
1,3,5-Trimethylbenzene	0.34	<0.18	<0.16	0.28	0.34	0.62
1,2,4-Trimethylbenzene	1.20	0.18	0.44	0.68	1.80	1.80
Acetone	4.40	6.20	4.50	2.70	10.00	3.10
Carbon Disulfide	<0.78	<0.88	<0.82	<0.92	<0.79	<0.92
2-Propanol	3.30	6.90	1.90	1.80	1.60	<0.92
trans-1,2-Dichloroethene	<0.78	<0.88	<0.82	<0.92	<0.79	2.20
2-Butanone (MEK)	1.10	2.70	1.20	<0.92	3.30	<0.92
Hexane	1.50	0.89	<0.82	1.80	3.20	5.90
1,4-Dioxane	1.50	<0.88	<0.82	<0.92	7.70	<0.92
4-Ethyltoluene	<0.78	<0.88	<0.82	<0.92	0.82	1.80
Ethanol	8.60	3.60	4.10	8.10	6.90	15.00
Heptane	<0.78	2.30	<0.82	1.90	<0.79	2.80

NOTE: ppmv = All results expressed in ppbv (parts per billion in volume)

ATTACHMENT A

FIGURES




DANIEL WEBSTER
MIDDLE SCHOOL
GROUND FLOOR PLAN

LEGEND

● = AIR SAMPLE LOCATION

NOTE:
DIMENSIONS DEPICTED ON MAP ARE FOR REFERENCE
ONLY - SITE HAS NOT BEEN SURVEYED.

DANIEL WEBSTER MIDDLE SCHOOL MILWAUKEE, WISCONSIN			 ENVIRONMENTAL SERVICES INC.
DATE: 02-14-01	DR. BY: BEB	DR. # 6156-002	SCALE: NOT TO SCALE
AIR SAMPLE LOCATIONS DECEMBER 2000 SAMPLING EVENT			FIGURE 1

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0012533

Work Order Summary

CLIENT: Mr. Mafizul Islam
Sigma Environmental
220 E. Ryan Road
Oak Creek, WI 53154

BILL TO: Mr. Mafizul Islam
Sigma Environmental
220 E. Ryan Road
Oak Creek, WI 53154

PHONE: 414-768-7144

P.O. #

FAX: 414-768-7158


PROJECT # 6156 WF Bay LF

DATE RECEIVED: 12/28/00

DATE COMPLETED: 1/15/01

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MPS-01B	TO-14-S	7.0 "Hg
02A	MPS-06B	TO-14-S	8.0 "Hg
03A	MPS-09B	TO-14-S	8.0 "Hg
04A	Lab Blank	TO-14-S	NA

CERTIFIED BY:


Laboratory Director

DATE:

1-26-01

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217, AZ ELAP - AZ0567

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
TO-14 Low Level
Sigma Environmental
Workorder# 0012533

Three 6 Liter Summa Canister samples were received on December 28, 2000. The laboratory performed analysis via EPA Method TO-14 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

During the five point calibration, two low-level standards are used. The low-level standard for TO-14 compounds is spiked at 0.1 ppbv and represents the reporting limit for these compounds. The low-level standard for the non-TO-14 compounds is spiked at 0.5 ppbv and represents the reporting limit for these compounds. The TO-14 compounds are present in both standards but are excluded from reporting in the 0.5 ppbv standard since a lower level is already included in the curve.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14 Low Level</i>	<i>ATL Modifications</i>
Sampling/concentrator system	Nafion Drier	Multisorbent concentrator
Canister cleaning - clean air supply	Cryogenic Trap	Use of Humidified UHP Air
Canister certification	Pressurize w/humidified zero air	Pressurize w/dry UHP nitrogen
Sample load volume	400 mL	Up to 0.5 liter
Blank	Humid air blank	Humid air blank for standard analysis. Dry air blank for low level analysis.
Blank acceptance criteria	< DL	< DL
BFB absolute abundance criteria	Within 10% of that from previous day.	CCV surrogate recoveries demonstrate stability from one day to the next
BFB acceptance criteria	SW-846 Protocol	SW-846 protocol
Concentration of IS spike	Not specified	10 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions
Flow rates/operating parameters	Not specified	Optimized. See procedures section.
ICAL RRF %RSD acceptance criteria	Not specified	30% or less for standard compounds, 40% or less for non-standard and polar compounds
IS recoveries	Within 40% of mean over ICAL for blanks, and w/in 40% of daily CCV for samples.	Within 40% of CCV recoveries for blank and samples.
IS RTs	Within .33 min from most recent calibration (either ICAL or daily)	Within 0.5 min of RT in daily CCV
Daily CCV	70 - 130%	Standard compounds: 70 - 130% for at least 90%; Non-standard and polar compounds: 60 - 140% for at least 80%
RF for quantitation	From daily CCV	From ICAL

Requirement	TO-14 Low Level	ATL Modifications
Canister leak check	24 hour, positive pressure	20 min, vacuum check
MSD scan range	35 - 300 amu	35 - 350 amu

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

THE WORK ORDER WAS REISSUED ON JANUARY 26, 2001 TO CORRECT RESULTS FOR ALL SAMPLES AND TO AMEND THE LABORATORY NARRATIVE.

THE DAILY CALIBRATION STANDARD (CCV) ANALYZED ON JAN 7, 2001 DID NOT MEET METHOD REQUIRED ACCEPTANCE CRITERIA. SIX AT-EXTRA COMPOUNDS WERE OUTSIDE OF ACCEPTANCE CRITERIA, INCLUDING ACETONE, ETHANOL AND HEPTANE, WHICH WERE REPORTED IN ALL SAMPLES. RESULTS FOR THESE COMPOUNDS MAY BE BIASED HIGH AND ARE REPORTED AS QUALIFIED.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

AIR TOXICS LTD.

SAMPLE NAME: MPS-01B

ID#: 0012533-01A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	1010711	Date of Collection:	12/27/00
Dil. Factor:	1.75	Date of Analysis:	1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.18	0.88	1.0	5.1
Freon 114	0.18	1.2	Not Detected	Not Detected
Chloromethane	0.18	0.37	0.64	1.3
Vinyl Chloride	0.18	0.45	Not Detected	Not Detected
Bromomethane	0.18	0.69	Not Detected	Not Detected
Chloroethane	0.18	0.47	Not Detected	Not Detected
Freon 11	0.18	1.0	0.21	1.2
1,1-Dichloroethene	0.18	0.70	Not Detected	Not Detected
Freon 113	0.18	1.4	Not Detected	Not Detected
Methylene Chloride	0.18	0.62	4.0	14
1,1-Dichloroethane	0.18	0.72	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.18	0.70	Not Detected	Not Detected
Chloroform	0.18	0.87	Not Detected	Not Detected
1,1,1-Trichloroethane	0.18	0.97	Not Detected	Not Detected
Carbon Tetrachloride	0.18	1.1	Not Detected	Not Detected
Benzene	0.18	0.57	0.41	1.3
1,2-Dichloroethane	0.18	0.72	Not Detected	Not Detected
Trichloroethene	0.18	0.96	Not Detected	Not Detected
1,2-Dichloropropane	0.18	0.82	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.18	0.81	Not Detected	Not Detected
Toluene	0.18	0.67	1.3	4.8
trans-1,3-Dichloropropene	0.18	0.81	Not Detected	Not Detected
1,1,2-Trichloroethane	0.18	0.97	Not Detected	Not Detected
Tetrachloroethene	0.18	1.2	Not Detected	Not Detected
Ethylene Dibromide	0.18	1.4	Not Detected	Not Detected
Chlorobenzene	0.18	0.82	Not Detected	Not Detected
Ethyl Benzene	0.18	0.77	Not Detected	Not Detected
m,p-Xylene	0.18	0.77	0.79	3.5
o-Xylene	0.18	0.77	0.39	1.7
Styrene	0.18	0.76	0.35	1.5
1,1,2,2-Tetrachloroethane	0.18	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.18	0.87	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.18	0.87	0.18	0.88
1,3-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,4-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
Chlorotoluene	0.18	0.92	Not Detected	Not Detected
1,2-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.18	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.18	1.9	Not Detected	Not Detected
Propylene	0.88	1.5	Not Detected	Not Detected
1,3-Butadiene	0.88	2.0	Not Detected	Not Detected
Acetone	0.88	2.1	6.2	15

AIR TOXICS LTD.

SAMPLE NAME: MPS-01B

ID#: 0012533-01A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	1010711	Date of Collection: 12/27/00
Dil. Factor:	1.75	Date of Analysis: 1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.88	2.8	Not Detected	Not Detected
2-Propanol	0.88	2.2	6.9	17
trans-1,2-Dichloroethene	0.88	3.5	Not Detected	Not Detected
Vinyl Acetate	0.88	3.1	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	2.6	2.7	8.1
Hexane	0.88	3.1	0.89	3.2
Tetrahydrofuran	0.88	2.6	Not Detected	Not Detected
Cyclohexane	0.88	3.1	Not Detected	Not Detected
1,4-Dioxane	0.88	3.2	Not Detected	Not Detected
Bromodichloromethane	0.88	6.0	Not Detected	Not Detected
4-Methyl-2-pentanone	0.88	3.6	Not Detected	Not Detected
2-Hexanone	0.88	3.6	0.91	3.8
Dibromochloromethane	0.88	7.6	Not Detected	Not Detected
Bromoform	0.88	9.2	Not Detected	Not Detected
4-Ethyltoluene	0.88	4.4	Not Detected	Not Detected
Ethanol	0.88	1.7	3.6	7.0
Methyl tert-Butyl Ether	0.88	3.2	Not Detected	Not Detected
Heptane	0.88	3.6	2.3	9.5

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: MPS-06B

ID#: 0012533-02A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	1010713	Date of Collection:	12/27/00
Dil. Factor:	1.83	Date of Analysis:	1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.18	0.92	1.3	6.4
Freon 114	0.18	1.3	Not Detected	Not Detected
Chloromethane	0.18	0.38	0.58	1.2
Vinyl Chloride	0.18	0.48	Not Detected	Not Detected
Bromomethane	0.18	0.72	Not Detected	Not Detected
Chloroethane	0.18	0.49	Not Detected	Not Detected
Freon 11	0.18	1.0	1.1	6.1
1,1-Dichloroethene	0.18	0.74	Not Detected	Not Detected
Freon 113	0.18	1.4	Not Detected	Not Detected
Methylene Chloride	0.18	0.65	0.34	1.2
1,1-Dichloroethane	0.18	0.75	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.18	0.74	3.8	16
Chloroform	0.18	0.91	Not Detected	Not Detected
1,1,1-Trichloroethane	0.18	1.0	Not Detected	Not Detected
Carbon Tetrachloride	0.18	1.2	Not Detected	Not Detected
Benzene	0.18	0.59	1.3	4.2
1,2-Dichloroethane	0.18	0.75	Not Detected	Not Detected
Trichloroethene	0.18	1.0	Not Detected	Not Detected
1,2-Dichloropropane	0.18	0.86	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.18	0.84	Not Detected	Not Detected
Toluene	0.18	0.70	3.4	13
trans-1,3-Dichloropropene	0.18	0.84	Not Detected	Not Detected
1,1,2-Trichloroethane	0.18	1.0	Not Detected	Not Detected
Tetrachloroethene	0.18	1.3	Not Detected	Not Detected
Ethylene Dibromide	0.18	1.4	Not Detected	Not Detected
Chlorobenzene	0.18	0.86	Not Detected	Not Detected
Ethyl Benzene	0.18	0.81	0.58	2.6
m,p-Xylene	0.18	0.81	2.3	10
o-Xylene	0.18	0.81	0.88	3.9
Styrene	0.18	0.79	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.18	1.3	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.18	0.91	0.28	1.4
1,2,4-Trimethylbenzene	0.18	0.91	0.68	3.4
1,3-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,4-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
Chlorotoluene	0.18	0.96	Not Detected	Not Detected
1,2-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.18	1.4	Not Detected	Not Detected
Hexachlorobutadiene	0.18	2.0	Not Detected	Not Detected
Propylene	0.92	1.6	Not Detected	Not Detected
1,3-Butadiene	0.92	2.0	Not Detected	Not Detected
Acetone	0.92	2.2	2.7	6.6

AIR TOXICS LTD.

SAMPLE NAME: MPS-06B

ID#: 0012533-02A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	t010713	Date of Collection: 12/27/00
Dil. Factor:	1.83	Date of Analysis: 1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.92	2.9	Not Detected	Not Detected
2-Propanol	0.92	2.3	1.8	4.6
trans-1,2-Dichloroethene	0.92	3.7	Not Detected	Not Detected
Vinyl Acetate	0.92	3.3	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.92	2.7	Not Detected	Not Detected
Hexane	0.92	3.3	1.8	6.5
Tetrahydrofuran	0.92	2.7	Not Detected	Not Detected
Cyclohexane	0.92	3.2	Not Detected	Not Detected
1,4-Dioxane	0.92	3.4	Not Detected	Not Detected
Bromodichloromethane	0.92	6.2	Not Detected	Not Detected
4-Methyl-2-pentanone	0.92	3.8	Not Detected	Not Detected
2-Hexanone	0.92	3.8	Not Detected	Not Detected
Dibromochloromethane	0.92	7.9	Not Detected	Not Detected
Bromoform	0.92	9.6	Not Detected	Not Detected
4-Ethyltoluene	0.92	4.6	Not Detected	Not Detected
Ethanol	0.92	1.8	8.1	16
Methyl tert-Butyl Ether	0.92	3.4	Not Detected	Not Detected
Heptane	0.92	3.8	1.9	7.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: MPS-09B

ID#: 0012533-03A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	t010714	Date of Collection:	12/27/00
Dil. Factor:	1.83	Date of Analysis:	1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.18	0.92	1.1	5.7
Freon 114	0.18	1.3	Not Detected	Not Detected
Chloromethane	0.18	0.38	0.49	1.0
Vinyl Chloride	0.18	0.48	0.18	0.47
Bromomethane	0.18	0.72	Not Detected	Not Detected
Chloroethane	0.18	0.49	Not Detected	Not Detected
Freon 11	0.18	1.0	0.22	1.3
1,1-Dichloroethene	0.18	0.74	Not Detected	Not Detected
Freon 113	0.18	1.4	Not Detected	Not Detected
Methylene Chloride	0.18	0.65	0.24	0.84
1,1-Dichloroethane	0.18	0.75	0.51	2.1
cis-1,2-Dichloroethene	0.18	0.74	38	150
Chloroform	0.18	0.91	Not Detected	Not Detected
1,1,1-Trichloroethane	0.18	1.0	Not Detected	Not Detected
Carbon Tetrachloride	0.18	1.2	Not Detected	Not Detected
Benzene	0.18	0.59	3.5	12
1,2-Dichloroethane	0.18	0.75	Not Detected	Not Detected
Trichloroethene	0.18	1.0	Not Detected	Not Detected
1,2-Dichloropropane	0.18	0.86	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.18	0.84	Not Detected	Not Detected
Toluene	0.18	0.70	9.4	36
trans-1,3-Dichloropropene	0.18	0.84	Not Detected	Not Detected
1,1,2-Trichloroethane	0.18	1.0	Not Detected	Not Detected
Tetrachloroethene	0.18	1.3	Not Detected	Not Detected
Ethylene Dibromide	0.18	1.4	Not Detected	Not Detected
Chlorobenzene	0.18	0.86	Not Detected	Not Detected
Ethyl Benzene	0.18	0.81	1.7	7.3
m,p-Xylene	0.18	0.81	6.6	29
o-Xylene	0.18	0.81	2.3	10
Styrene	0.18	0.79	0.20	0.87
1,1,2,2-Tetrachloroethane	0.18	1.3	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.18	0.91	0.62	3.1
1,2,4-Trimethylbenzene	0.18	0.91	1.8	9.1
1,3-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,4-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
Chlorotoluene	0.18	0.96	Not Detected	Not Detected
1,2-Dichlorobenzene	0.18	1.1	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.18	1.4	Not Detected	Not Detected
Hexachlorobutadiene	0.18	2.0	Not Detected	Not Detected
Propylene	0.92	1.6	Not Detected	Not Detected
1,3-Butadiene	0.92	2.0	Not Detected	Not Detected
Acetone	0.92	2.2	3.1	7.4

AIR TOXICS LTD.

SAMPLE NAME: MPS-09B

ID#: 0012533-03A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	1010714	Date of Collection:	12/27/00
Dil. Factor:	1.83	Date of Analysis:	1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.92	2.9	Not Detected	Not Detected
2-Propanol	0.92	2.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.92	3.7	2.2	9.1
Vinyl Acetate	0.92	3.3	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.92	2.7	Not Detected	Not Detected
Hexane	0.92	3.3	5.9	21
Tetrahydrofuran	0.92	2.7	Not Detected	Not Detected
Cyclohexane	0.92	3.2	0.95	3.3
1,4-Dioxane	0.92	3.4	Not Detected	Not Detected
Bromodichloromethane	0.92	6.2	Not Detected	Not Detected
4-Methyl-2-pentanone	0.92	3.8	Not Detected	Not Detected
2-Hexanone	0.92	3.8	Not Detected	Not Detected
Dibromochloromethane	0.92	7.9	Not Detected	Not Detected
Bromoform	0.92	9.6	Not Detected	Not Detected
4-Ethyltoluene	0.92	4.6	1.8	8.9
Ethanol	0.92	1.8	15	28
Methyl tert-Butyl Ether	0.92	3.4	Not Detected	Not Detected
Heptane	0.92	3.8	2.8	12

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0012533-04A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	1010705	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.10	0.50	Not Detected	Not Detected
Freon 114	0.10	0.71	Not Detected	Not Detected
Chloromethane	0.10	0.21	Not Detected	Not Detected
Vinyl Chloride	0.10	0.26	Not Detected	Not Detected
Bromomethane	0.10	0.39	Not Detected	Not Detected
Chloroethane	0.10	0.27	Not Detected	Not Detected
Freon 11	0.10	0.57	Not Detected	Not Detected
1,1-Dichloroethene	0.10	0.40	Not Detected	Not Detected
Freon 113	0.10	0.78	Not Detected	Not Detected
Methylene Chloride	0.10	0.35	Not Detected	Not Detected
1,1-Dichloroethane	0.10	0.41	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.40	Not Detected	Not Detected
Chloroform	0.10	0.50	Not Detected	Not Detected
1,1,1-Trichloroethane	0.10	0.55	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.64	Not Detected	Not Detected
Benzene	0.10	0.32	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.41	Not Detected	Not Detected
Trichloroethene	0.10	0.55	Not Detected	Not Detected
1,2-Dichloropropane	0.10	0.47	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.10	0.46	Not Detected	Not Detected
Toluene	0.10	0.38	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.10	0.46	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.55	Not Detected	Not Detected
Tetrachloroethene	0.10	0.69	Not Detected	Not Detected
Ethylene Dibromide	0.10	0.78	Not Detected	Not Detected
Chlorobenzene	0.10	0.47	Not Detected	Not Detected
Ethyl Benzene	0.10	0.44	Not Detected	Not Detected
m,p-Xylene	0.10	0.44	Not Detected	Not Detected
o-Xylene	0.10	0.44	Not Detected	Not Detected
Styrene	0.10	0.43	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.10	0.70	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.10	0.50	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.50	Not Detected	Not Detected
1,3-Dichlorobenzene	0.10	0.61	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.61	Not Detected	Not Detected
Chlorotoluene	0.10	0.53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.10	0.61	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.10	0.75	Not Detected	Not Detected
Hexachlorobutadiene	0.10	1.1	Not Detected	Not Detected
Propylene	0.50	0.87	Not Detected	Not Detected
1,3-Butadiene	0.50	1.1	Not Detected	Not Detected
Acetone	0.50	1.2	Not Detected	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0012533-04A

EPA METHOD TO-14 GC/MS FULL SCAN

File Name:	t010705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/7/01

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.50	1.6	Not Detected	Not Detected
2-Propanol	0.50	1.2	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Vinyl Acetate	0.50	1.8	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	1.5	Not Detected	Not Detected
Hexane	0.50	1.8	Not Detected	Not Detected
Tetrahydrofuran	0.50	1.5	Not Detected	Not Detected
Cyclohexane	0.50	1.7	Not Detected	Not Detected
1,4-Dioxane	0.50	1.8	Not Detected	Not Detected
Bromodichloromethane	0.50	3.4	Not Detected	Not Detected
4-Methyl-2-pentanone	0.50	2.1	Not Detected	Not Detected
2-Hexanone	0.50	2.1	Not Detected	Not Detected
Dibromochloromethane	0.50	4.3	Not Detected	Not Detected
Bromoform	0.50	5.2	Not Detected	Not Detected
4-Ethyltoluene	0.50	2.5	Not Detected	Not Detected
Ethanol	0.50	0.96	Not Detected	Not Detected
Methyl tert-Butyl Ether	0.50	1.8	Not Detected	Not Detected
Heptane	0.50	2.1	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	88	70-130