

August 7, 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.: Air Quality Investigation Results, Webster Middle School, Milwaukee, Wisconsin

Dear Mr. Nehls-Lowe:

Enclosed for your review is the data package for the air quality investigation activities completed by Sigma Environmental Services, Inc. and Christensen Environmental Services at Webster Middle School located in Milwaukee, Wisconsin on July 10, 2000. The purpose of the air quality investigation is to characterize the air in several occupied and unoccupied spaces inside the school building for the presence of chlorinated volatile organic compounds (CVOCs), specifically cis-1,2-dichloroethene (DCE) and vinyl chloride that may have infiltrated the building from the impacted groundwater identified beneath the school building. With two minor modifications, the activities summarized here were conducted in accordance with the scope of work previously submitted to you on June 20, 2000 in response to your letter dated May 31, 2000.

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 locations, sampling times, and site conditions (Table 1)
- A summary of the air sample laboratory analytical results (Attachment A)
- A map of the air sample locations and direction of air movement at the day of sampling (Attachment B)
- Copies of the laboratory analytical reports from Air Toxics, LTD. (Attachment C)
- Photographs of the air sample locations (Attachment D)

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- Chain-of-Custody records (Attachment E)
- Soil Boring/Geoprobe Well Construction Logs (Attachment F)

INVESTIGATION ACTIVITIES

The investigation activities were designed to comply with the Wisconsin Department of Health and Family Services request to: 1) evaluate indoor air quality, with respect to chlorinated solvent vapors, within Webster Middle School (School) and 2) evaluate subsurface soil vapor conditions at three locations outside of the school building.

Indoor Air Quality Monitoring Air quality monitoring for chlorinated solvent vapors was performed by Christensen Environmental Services in the three, unfinished ground floor areas and several selected occupied areas of the school. Background ambient air quality conditions were also monitored on the first floor and exterior of the building.

On July 10, 2000, 17 indoor air samples (MPS 01 through MPS 17, see attached figures) from inside the school building were collected to determine if the CVOCs from the groundwater had migrated through the soil infiltrating the school building. Nine indoor air samples were collected in three unpaved, unoccupied ground floor areas and six indoor air samples were collected from five occupied areas of the school building. In addition, two outdoor air samples were collected upwind of the school building to serve as a reference. Note that two indoor air samples (MPS 08 and MPS 10) could not be completed as planned because the vacuum gauges on the flow controllers malfunctioned and samples were not analyzed.

- 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 17 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 spectrophotometry instrumentation (GC/MS). Limits of detection were < 1 ppbv (parts per billion volume).
- The air sample locations inside Webster Middle School and the numbers and types of samples at each location are summarized in Table 1. Note that three of the indoor air

samples (MPS 03, MPS 05 and MPS 13, one from each unoccupied, unfinished area) were analyzed and a preliminary laboratory report of the results was submitted within 48 hours of the investigation. Maps of the sample locations are attached (Attachment A).

- Before the sampling period, the two primary HVAC systems servicing the school building had been turned off for over 60 hours. For 29 hours prior to turning the HVAC systems off, the building was supplied with 100% outdoor air for dilution ventilation. The dilution ventilation was supplied in order to dilute, as much as practical, the volatile organic compounds that may have been present in the building from previous painting (using Devoe Coatings alkyd gloss enamel paint) and cleaning operations (using San-A-Car 105 floor stripping product, floor wax, and various detergents) performed during July 5 and 6, 2000.
- A slight negative pressure was present in the school building causing the air movement from unoccupied spaces to move toward the occupied spaces of the school building as verified with ventilation smoke tubes.
- Eighty bags, barrels, and buckets of thermoplastic pellets which may contain CVOCs were stored inside the school building in area UF6. Thermoplastic pellets included GE Valox, PMS Consolidated PM5, Dow Tyron, Allied Chemical Capron, TPR Thermorubber, Cicolax, and Ferro products.
- Ground level air samples were collected at one to two feet off the floor. Breathing zone air samples were collected at 4 ½ to 5 ½ feet off the floor. The ceiling plenum air sample was collected at eight to nine feet off the floor and above the false ceiling.
- Weather conditions at Mitchell International on July 10, 2000 were: 1) 6 am-thunderstorms, rain, temperatures in the 70's, west winds at 7 mph, barometric pressure rising at 29.83 and relative humidity of 92%; and 2) 11 am-clear skies, temperatures in the 70's, south winds at 6 mph, barometric pressure falling at 29.85, and relative humidity of 90%. Winds at the Webster Middle School were from the north to northeast during the sampling period, temperatures were in the 70's and the relative humidity was 98%. Temperature and relative humidity were measured during the survey using a Solomat Model 500E meter.

TABLE 1. SUMMARY OF THE AIR SAMPLE LOCATIONS, TYPES, AND SAMPLING TIMES

Sample Number	Location	Sample Type	Sample Time, Temperature, Relative Humidity	Comments
MPS-01	UF6, unpaved area, center of the room	breathing zone	8:22a-9:47a 72 degrees F 86% RH	overhead door leading to the outside was closed
MPS-02	UF6, unpaved area, east side of the room	ground level	8:22a-9:41a 72 degrees F 86% RH	--
MPS-03	UF6, unpaved area, southwest corner of the room in the alcove	ground level	8:23a-9:42a 72 degrees F 86% RH	standing water on the floor along the interior wall and damp floor along the exterior wall
MPS-04	UF6, unpaved area at thermoplastic pellet storage area	ground level	8:25a-9:48a 72 degrees F 86% RH	thermoplastic pellets on the floor in paper bags, buckets, and barrels
MPS-05	UF1, unpaved area, north side of the room	ground level	8:27a-9:43a 72 degrees F 84% RH	floor of room dry
MPS-06	UF1, unpaved area center of the room	breathing zone	8:27a-9:50a 72 degrees F 84% RH	floor of room dry
MPS-07	UF1, unpaved area, south side of room	ground level	8:28a-9:50a 72 degrees F 84% RH	floor of room dry
MPS-09	UF44, unpaved area, east side of room at the wall	ground level	8:31a-9:37a 72 degrees F 83% RH	floor of room dry
MPS-11	Room 44, Ground floor, Staff Development Center at the west wall	ceiling plenum	8:34a-9:52a 72 degrees F 70% RH	--

TABLE 1. SUMMARY OF THE AIR SAMPLE LOCATIONS, TYPES, AND SAMPLING TIMES
 (Contd.)

Sample Number	Location	Sample Type	Sample Time, Temperature, Relative Humidity	Comments
MPS-12	Room 44, Ground floor, Staff Development Center southwest side of the room	breathing zone	8:34a-9:53a 72 degrees F 70% RH	--
MPS-13	UF44, unpaved area, northwest corner of the room near the alcove	ground level	8:36a-9:51a 72 degrees F 83% RH	floor of room dry
MPS-14	Corridor G-7, Ground floor, corridor	ground level	8:37a-9:56a 73 degrees F 82% RH	--
MPS-15	Room 5, Ground floor, center of room	ground level	8:38a-9:56a 72 degree F 73% RH	small quantities of paints, inks, White-Out, and liquid cleaner stored in cabinets in the room
MPS-16	Room 100, First floor, center area of room, man-fan operating in room	ground level	8:40a-9:55a 74 degrees F 67% RH	routine office supplies present and activities performed by office staff during sampling period
MPS-17	Corridor 1-2, First floor, corridor near Room 143	ground level	8:41a-9:56a 75 degrees F 64% RH	30 feet from men's rest room
MPS-18	Outside, upwind, northeast of school building	ground level	8:10a-9:21a 70 degrees F 98% RH	one automobile drove by 2 times over a 10 minute period
MPS-19	Outside, upwind, north of school building	ground level	8:13a-9:25a 70 degrees F 98 % RH	one automobile drove by 2 times over a 10 minute period

Subsurface Vapor Study. A subsurface soil vapor study was performed to determine the potential for the generation and migration of vapors from the dissolved phase in the groundwater to the vapor phase in the underlying unsaturated soils. Sigma installed three 1.5-inch diameter permanent soil vapor probes along the north, west, and southern sides of the School (MPS VP-1, MPS VP-2 and MPS VP-3, adjacent to the unfinished areas UF 6, UF 1 and UF 44, respectively, Figure 1). The vapor probes were installed using the GeoProbe™ soil boring method with one soil gas sample collected at each location from a depth interval of eight to twelve feet below ground surface. Prior to installation of the gas probes, each well screen was decontaminated at the Sigma facility using Hexane, followed by a triple rinse with deionized water, and packed in aluminum foil for field installation. Each of the soil gas probes was finished as a permanent well and completed within a well flush mount. Similar to indoor air sampling, the soil vapor samples were collected in a laboratory supplied SUMMA™ Canister and submitted for laboratory analysis of volatile organic compounds using EPA Method TO14S.

Laboratory Analytical Results The project was coordinated with Milwaukee Public Schools representatives and implemented with the help of Wisconsin Division of Public Health officials. Three of the indoor air samples (MPS 03, MPS 05 and MPS 13, one from each unoccupied area) was analyzed within 48 hours of the investigation and the remaining 17 air samples were analyzed within two weeks of the on-site sampling activities.

The following is a summary of the results of the laboratory analyses:

- Cis-1,2-dichloroethene (DCE) was detected in 8 of 9 air samples collected in 3 unpaved, unoccupied areas of the school at concentrations ranging from 0.17 to 5.0 parts per billion (ppb). DCE was detected in 4 of 6 air samples collected in 5 occupied areas of the school at concentrations ranging from 0.20 to 2.0 ppb. DCE was not detected in the outdoor air at concentrations above the method detection limit (MDL) of the analytical method (<0.16 ppb).
- Vinyl chloride was not detected above the MDL in the 15 indoor air samples or the 2 outdoor air samples (<0.16 ppb).
- Methylene chloride was detected in 7 of 9 air samples collected in 3 unpaved, unoccupied areas of the school at concentrations ranging from 0.18 to 0.41 ppb. Methylene chloride was detected in 6 of 6 air samples collected in 5 occupied areas of the school at concentrations ranging from 0.30 to 1.6 ppb. Methylene chloride was also detected in the outdoor air at 0.28 and 0.38 ppb.
- Trans-1,2-Dichloroethene was not detected in any air samples collected in 3 unpaved, unoccupied areas of the school at concentrations above the MDL. Trans-1,2-Dichloroethene was detected in 1 of 5 air samples collected in occupied areas of the school at a concentration of 0.32 ppb. Trans-1,2-Dichloroethene was not detected in the 2 outdoor air samples.

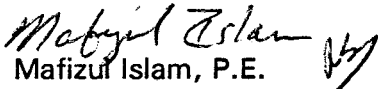
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Wisconsin Division of Health
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- Chloroform was not detected above the MDL in the 15 indoor air samples or the 2 outdoor air samples (<0.16 ppb).
- 1,1-Dichloroethane was not detected above the MDL in the 15 indoor air samples or the 2 outdoor air samples (<0.16 ppb)
- Laboratory analysis of the three soil vapor samples collected from three geoprobe wells indicate the presence of relatively high concentrations of hexane (between 210 ppm and 60,000 ppm). Two of the soil vapor samples also contained methylene chloride (between 3.4 ppm and 1700 ppm), and one sample contained 2-propanol at 6 ppm. Because of the presence of the relatively high concentrations of hexane in the vapor samples, dilution of the samples were necessary and consequently the detection limits for all the constituents were elevated. No target CVOCs were detected at concentrations greater than elevated detection limits. It is evident that during the decontamination process the cleaning solvent (Hexane) used to decontaminate the well screen remained in the screen material after the triple rinse with deionized water. Therefore, the results of the subsurface soil vapor study do not provide low level detection analyses information regarding the subsurface vapor conditions beneath the school building.

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.
Jim Grassman / Village of Whitefish Bay
Terri Linder / City of Milwaukee Health Department
Andrew Boettcher / DNR SE Regional Office
Thomas J. Chojnacki / MPS
Peggy Christensen / CES

ATTACHMENT A

SUMMARY TABLE OF AIR QUALITY ANALYTICAL RESULTS

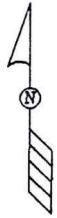
Air Quality Analytical Results
 Village of Whitefish Bay Former Demolition Landfill Site

Analyte	Sample Location/Date																			
	MPS01	MPS02	MPS03	MPS04	MPS05	MPS06	MPS07	MPS09	MPS11	MPS12	MPS13	MPS14	MPS15	MPS16	MPS17	MPS18	MPS19	MPS-VP1	MPS-VP2	MPS-VP3
	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00	07/10/00
Freon 12	2.00	1.90	1.70	2.20	2.40	2.80	2.20	0.84	0.85	0.94	0.83	1.30	1.30	1.10	1.30	0.78	0.82	<470	<2.3E+5	<960
Chloromethane	0.38	0.29	0.51	0.28	0.35	0.58	0.21	0.47	0.64	1.40	0.34	0.79	0.80	0.93	0.91	2.00	1.00	<470	<2.3E+5	<960
Chloroethane	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.16	0.16	<0.16	<0.17	<0.16	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<470	<2.3E+5	<960
Freon 11	0.33	0.31	0.50	0.32	4.30	3.40	3.40	0.46	0.28	0.31	0.42	0.35	0.53	0.50	0.52	0.18	<0.18	<470	<2.3E+5	<960
Methylene Chloride	0.41	0.38	0.35	0.36	0.18	<0.16	0.22	<0.16	0.30	0.38	0.21	0.45	1.60	0.74	0.83	0.38	0.28	<470	1.7E+006	3400
cis-1,2-Dichloroethene	0.17	0.23	<0.16	0.22	1.10	2.60	2.20	5.00	2.00	0.72	4.10	<0.17	<0.17	0.20	0.20	<0.18	<0.18	<470	<2.3E+5	<960
1,1,1-Trichloroethane	0.36	0.34	0.38	0.35	0.27	0.20	0.17	<0.16	<0.16	<0.17	<0.16	0.37	10.00	1.20	1.20	<0.18	<0.18	<470	<2.3E+5	<960
Benzene	0.30	0.28	0.36	0.32	0.45	0.46	0.40	0.68	0.67	1.20	0.57	0.66	1.10	0.93	0.94	1.40	0.80	<470	<2.3E+5	<960
1,2-Dichloroethane	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.17	<0.17	<0.17	<0.17	1.10	<0.18	<470	<2.3E+5	<960
Trichloroethene	<0.16	<0.16	<0.16	<0.16	0.69	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<470	<2.3E+5	<960
Toluene	2.10	1.20	1.80	1.20	0.98	0.78	0.78	1.60	0.49	3.30	1.80	2.90	4.40	5.50	3.20	2.80	2.70	<470	<2.3E+5	<960
Tetrachloroethene	<0.16	<0.16	<0.16	<0.16	0.20	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.17	0.22	0.34	<0.17	<0.18	<0.18	<470	<2.3E+5	<960
Chlorobenzene	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.16	<0.16	<0.16	<0.17	<0.16	<0.17	0.26	<0.17	<0.17	1.20	0.23	<470	<2.3E+5	<960
Ethylbenzene	0.47	0.26	0.39	0.34	<0.17	0.24	0.19	<0.16	<0.16	1.30	0.18	0.48	0.78	0.71	0.72	<0.18	<0.18	<470	<2.3E+5	<960
m,p-Xylene	1.40	0.93	1.20	1.20	0.43	0.47	0.43	1.50	<0.16	4.20	0.64	1.40	2.80	2.90	2.60	0.59	0.54	<470	<2.3E+5	<960
o-Xylene	0.61	0.37	0.53	0.54	0.18	0.25	0.21	0.67	<0.16	1.50	0.24	0.43	0.96	0.84	0.88	<0.18	0.18	<470	<2.3E+5	<960
Total Xylenes	2.01	1.30	1.73	1.74	0.61	0.72	0.64	2.17	<0.32	5.70	0.88	1.83	3.76	3.74	3.48	0.59	0.72	<940	<4.6E+5	<1920
Styrene	0.26	0.17	0.19	0.18	0.27	0.52	0.39	<0.16	<0.16	0.24	<0.16	0.27	<0.17	0.18	0.19	<0.18	<0.18	<470	<2.3E+5	<960
1,3,5-Trimethylbenzene	0.34	0.21	0.29	0.31	<0.17	<0.16	<0.16	0.34	<0.16	0.45	<0.16	0.35	0.38	0.30	0.47	<0.18	<0.18	<470	<2.3E+5	<960
1,2,4-Trimethylbenzene	1.20	0.77	0.83	1.10	0.37	0.44	0.39	1.80	<0.16	1.40	0.37	1.20	0.93	0.96	1.60	0.34	0.26	<470	<2.3E+5	<960
Acetone	4.40	6.30	4.80	5.90	4.80	4.50	3.60	10.00	15.00	18.00	5.50	11.00	16.00	22.00	7.70	4.40	10.00	<470	<2.3E+5	<960
Carbon Disulfide	<0.78	<0.82	<0.79	0.83	<0.84	<0.82	1.40	<0.79	0.90	<0.84	<0.82	1.10	0.85	<0.84	<0.86	<0.88	<0.88	<2300	<1.1E+6	<4800
2-Propanol	3.30	3.00	<0.79	2.70	<0.84	1.90	1.40	1.60	3.10	4.20	<0.82	2.80	5.30	4.50	2.80	1.20	2.00	<2300	<1.1E+6	6000
trans-1,2-Dichloroethene	<0.78	<0.82	<0.79	<0.82	<0.84	<0.82	<0.82	<0.79	0.32	<0.84	<0.82	<0.84	<0.84	<0.84	<0.86	<0.88	<0.88	<2300	<1.1E+6	<4800
2-Butanone (MEK)	1.10	<0.82	<0.79	<0.82	<0.84	1.20	<0.82	3.30	1.60	1.40	0.92	0.85	1.70	2.80	1.50	<0.88	<0.88	<2300	<1.1E+6	<4800
Hexane	1.50	2.00	1.60	2.20	1.30	<0.82	5.40	3.20	14.00	1.80	<0.82	3.00	2.90	2.30	1.30	<0.88	<0.88	2.1E+005	6.0E+007	3.2E+005
1,4-Dioxane	1.50	<0.82	<0.79	<0.82	<0.84	<0.82	<0.82	7.70	<0.82	1.90	<0.82	<0.84	<0.84	<0.84	<0.86	1.60	0.99	<2300	<1.1E+6	<4800
4-Ethyltoluene	<0.78	<0.82	<0.79	0.60	<0.84	<0.82	<0.82	0.82	<0.82	1.00	<0.82	<0.84	0.99	<0.84	0.96	<0.88	<0.88	<2300	<1.1E+6	<4800
Ethanol	8.60	7.10	6.80	7.40	20.00	4.10	4.80	6.90	18.00	19.00	8.60	16.00	19.00	26.00	27.00	3.30	4.80	<2300	<1.1E+6	<4800
Heptane	<0.78	<0.82	<0.79	<0.82	<0.84	<0.82	<0.82	<0.79	<0.82	0.90	<0.82	<0.84	3.30	6.40	1.00	<0.88	<0.88	<2300	<1.1E+6	<4800

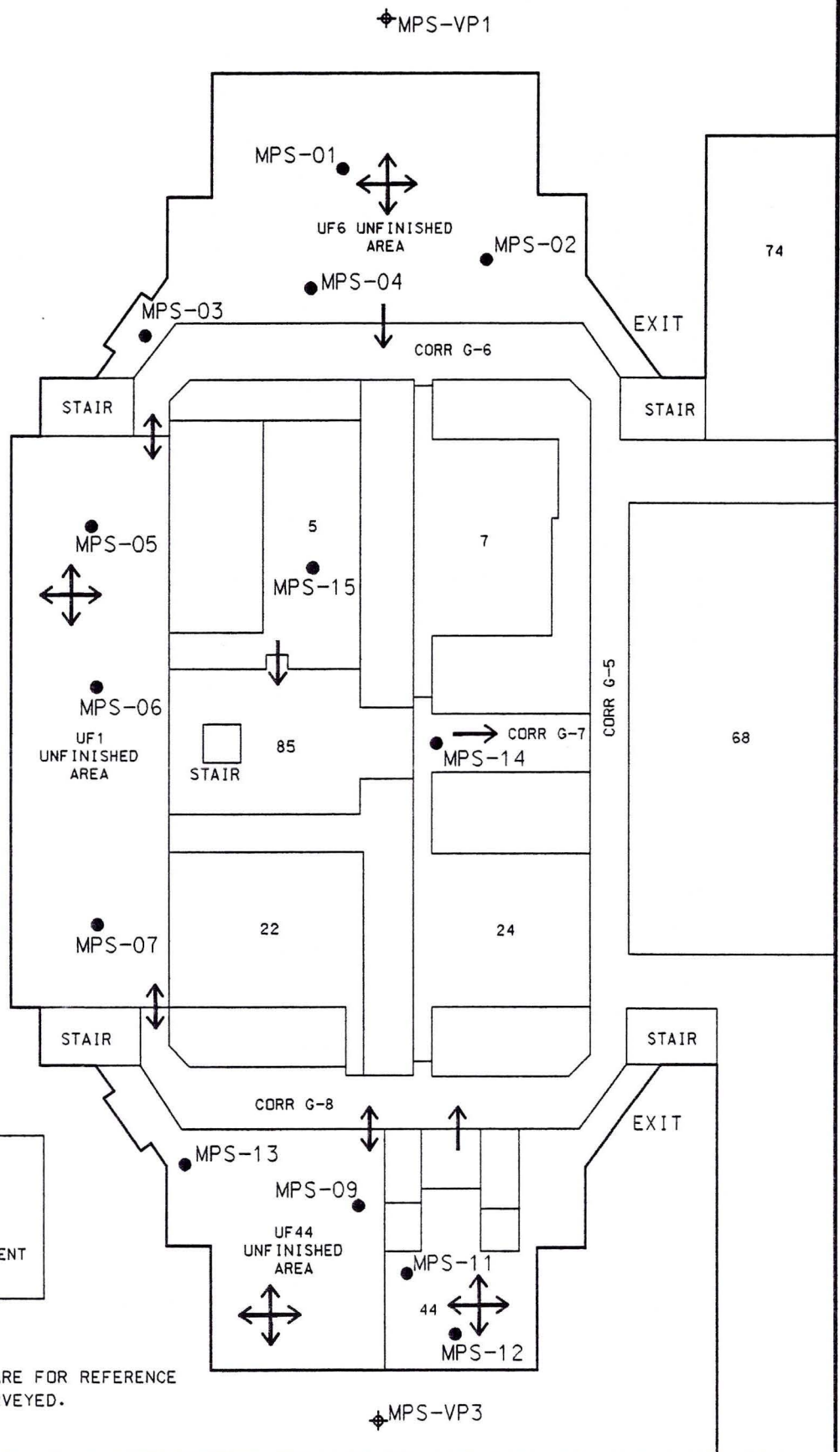
KEY: All results expressed in ppbv (parts per billion in volume)

ATTACHMENT B

FIGURES



DANIEL WEBSTER MIDDLE SCHOOL
GROUND FLOOR PLAN

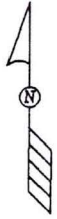


LEGEND

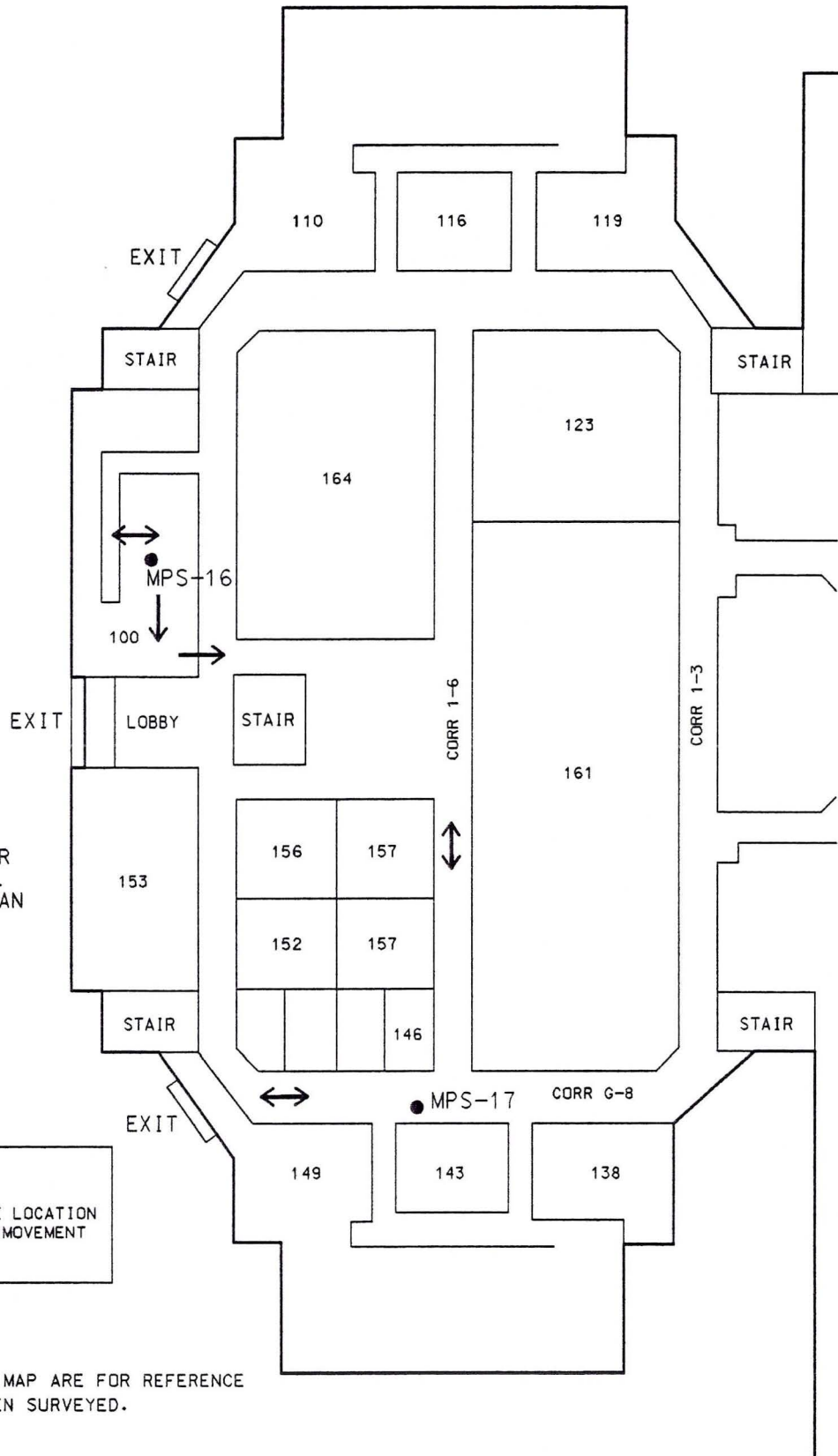
- = AIR SAMPLE LOCATION
- ⊕ = GEOPROBE WELL VAPOR SAMPLE LOCATION
- ← = DIRECTION OF AIR MOVEMENT ON 7-10-00

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

<p>DANIEL WEBSTER MIDDLE SCHOOL MILWAUKEE, WISCONSIN</p>			
DATE: 7-25-00	DR. BY: BEB	DR. # 6156-002	SCALE: NOT TO SCALE
<p>AIR/ VAPOR SAMPLE LOCATIONS GROUND FLOOR</p>			<p>FIGURE 1</p>



DANIEL WEBSTER
MIDDLE SCHOOL
FIRST FLOOR PLAN



LEGEND

- = AIR/ VAPOR SAMPLE LOCATION
- ← = DIRECTION OF AIR MOVEMENT ON 7-10-00

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

<p>DANIEL WEBSTER MIDDLE SCHOOL MILWAUKEE, WISCONSIN</p>			
DATE: 7-25-00	DR. BY: BEB	DR.# 6156-002	SCALE: NOT TO SCALE
<p>AIR/ VAPOR SAMPLE LOCATIONS FIRST FLOOR</p>			<p>FIGURE 2</p>

ATTACHMENT C
LABORATORY ANALYTICAL REPORTS

**WORK ORDER #: 0007117B**

Work Order Summary

CLIENT: Ms. Peggy Christensen
Christensen Environmental Services
14450 Lilly Heights Drive
Brookfield, WI 53005

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

PHONE: 262-781-3371

FAX: 262-781-4107

DATE RECEIVED: 7/11/00

DATE COMPLETED: 7/25/00

P.O. #

PROJECT # 3125 MPS

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MPS 01	TO-14-S	4.0 "Hg
02A	MPS 02	TO-14-S	5.5 "Hg
04A	MPS 04	TO-14-S	5.5 "Hg
06A	MPS 06	TO-14-S	5.5 "Hg
07A	MPS 07	TO-14-S	5.5 "Hg
08A	MPS 09	TO-14-S	4.5 "Hg
09A	MPS 11	TO-14-S	5.5 "Hg
10A	MPS 12	TO-14-S	6.0 "Hg
12A	MPS 14	TO-14-S	6.0 "Hg
13A	MPS 15	TO-14-S	6.0 "Hg
14A	MPS 16	TO-14-S	6.0 "Hg
15A	MPS 17	TO-14-S	6.5 "Hg
16A	MPS 18	TO-14-S	7.0 "Hg
17A	MPS 19	TO-14-S	7.0 "Hg
18A	Lab Blank	TO-14-S	NA

CERTIFIED BY:

Laboratory Director

DATE:

7/25/00

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
Christensen Environmental Services
Workorder# 0007117B

Fourteen 6 Liter Summa Canister samples were received on July 11, 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

<i>Requirement</i>	<i>TO-14 Low Level</i>	<i>ATL Modifications</i>
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

There were no analytical discrepancies.

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.



WORK ORDER #: 0007117A

Work Order Summary

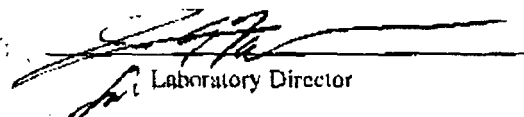
CLIENT: Ms. Peggy Christensen
Christensen Environmental Services
14450 Lilly Heights Drive
Brookfield, WI 53005

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

PHONE: 262-781-3371
FAX: 262-781-4107
DATE RECEIVED: 7/11/00
DATE COMPLETED: 7/13/00

P.O. #
PROJECT # 3125 MPS

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
03A	MPS 03	TO-14-S	4.5 "Hg
05A	MPS 05	TO-14-S	6.0 "Hg
11A	MPS 13	TO-14-S	5.5 "Hg
12A	Lab Blank	TO-14-S	NA

CERTIFIED BY: 
Laboratory Director

DATE: 7/13/00

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
Christensen Environmental Services
Workorder# 0007117A

Three 6 Liter Summa Canister samples were received on July 11, 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

<i>Requirement</i>	<i>TO-14 Low Level</i>	<i>ATL Modifications</i>
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

There were no analytical discrepancies.

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 01

ID#: 0007117B-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071520	Date of Collection:	7/10/00
Dil. Factor:	1.55	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.78	2.0	9.9
Freon 114	0.16	1.1	Not Detected	Not Detected
Chloromethane	0.16	0.32	0.38	0.81
Vinyl Chloride	0.16	0.40	Not Detected	Not Detected
Bromomethane	0.16	0.61	Not Detected	Not Detected
Chloroethane	0.16	0.42	Not Detected	Not Detected
Freon 11	0.16	0.88	0.33	1.9
1,1-Dichloroethene	0.16	0.62	Not Detected	Not Detected
Freon 113	0.16	1.2	Not Detected	Not Detected
Methylene Chloride	0.16	0.55	0.41	1.4
1,1-Dichloroethane	0.16	0.64	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.62	0.17	0.69
Chloroform	0.16	0.77	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.86	0.36	2.0
Carbon Tetrachloride	0.16	0.99	Not Detected	Not Detected
Benzene	0.16	0.50	0.30	0.96
1,2-Dichloroethane	0.16	0.64	Not Detected	Not Detected
Trichloroethene	0.16	0.85	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.73	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.16	0.72	Not Detected	Not Detected
Toluene	0.16	0.59	2.1	8.0
trans-1,3-Dichloropropene	0.16	0.72	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.86	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.2	Not Detected	Not Detected
Chlorobenzene	0.16	0.72	Not Detected	Not Detected
Ethyl Benzene	0.16	0.68	0.47	2.1
m,p-Xylene	0.16	0.68	1.4	6.4
o-Xylene	0.16	0.68	0.61	2.7
Styrene	0.16	0.67	0.26	1.1
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.77	0.34	1.7
1,2,4-Trimethylbenzene	0.16	0.77	1.2	6.0
1,3-Dichlorobenzene	0.16	0.95	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	0.95	Not Detected	Not Detected
Chlorotoluene	0.16	0.82	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	0.95	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.7	Not Detected	Not Detected
Propylene	0.78	1.4	Not Detected	Not Detected
1,3-Butadiene	0.78	1.7	Not Detected	Not Detected
Acetone	0.78	1.9	4.4	11

AIR TOXICS LTD.

SAMPLE NAME : MPS 01

ID#: 0007117B-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071620	Date of Collection:	7/19/00
Dil. Factor:	1.55	Date of Analysis:	7/18/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.78	2.4	Not Detected	Not Detected
2-Propanol	0.78	1.9	3.3	8.3
trans-1,2-Dichloroethene	0.78	3.1	Not Detected	Not Detected
Vinyl Acetate	0.78	2.8	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	2.3	1.1	3.2
Hexane	0.78	2.8	1.5	5.5
Tetrahydrofuran	0.78	2.3	Not Detected	Not Detected
Cyclohexane	0.78	2.7	Not Detected	Not Detected
1,4-Dioxane	0.78	2.8	1.5	5.5
Bromodichloromethane	0.78	5.3	Not Detected	Not Detected
4-Methyl-2-pentanone	0.78	3.2	Not Detected	Not Detected
2-Hexanone	0.78	3.2	Not Detected	Not Detected
Dibromochloromethane	0.78	6.7	Not Detected	Not Detected
Bromoform	0.78	8.1	Not Detected	Not Detected
4-Ethyltoluene	0.78	3.9	Not Detected	Not Detected
Ethanol	0.78	1.5	8.6	16
Methyl tert-Butyl Ether	0.78	2.8	Not Detected	Not Detected
Heptane	0.78	3.2	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 02

ID#: 0007117B-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071621	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	1.9	9.4
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.29	0.61
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	0.31	1.8
1,1-Dichloroethane	0.16	0.66	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	0.38	1.3
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethane	0.16	0.66	0.23	0.93
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	0.34	1.9
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.53	0.28	0.90
1,2-Dichloroethane	0.16	0.67	Not Detected	Not Detected
Trichloroethane	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	1.2	4.5
trans-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	0.26	1.1
m,p-Xylene	0.16	0.72	0.93	4.1
o-Xylene	0.16	0.72	0.37	1.6
Styrene	0.16	0.71	0.17	0.75
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	0.21	1.1
1,2,4-Trimethylbenzene	0.16	0.82	0.77	3.9
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.66	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.9	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	6.3	15

AIR TOXICS LTD.

SAMPLE NAME : MPS 02

ID#: 0007117B-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071621	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/18/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	Not Detected	Not Detected
2-Propanol	0.82	2.0	3.0	7.6
trans-1,2-Dichloroethene	0.82	3.3	Not Detected	Not Detected
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	Not Detected	Not Detected
Hexane	0.82	2.9	2.0	7.1
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	Not Detected	Not Detected
Ethanol	0.82	1.6	7.1	14
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 03

ID#: 0007117A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071315	Date of Collection:	7/10/00
Dil. Factor:	1.58	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.79	1.7	8.8
Freon 114	0.16	1.1	Not Detected	Not Detected
Chloromethane	0.16	0.33	0.51	1.1
Vinyl Chloride	0.16	0.41	Not Detected	Not Detected
Bromomethane	0.16	0.62	Not Detected	Not Detected
Chloroethane	0.16	0.42	Not Detected	Not Detected
Freon 11	0.16	0.90	0.50	2.9
1,1-Dichloroethane	0.16	0.64	Not Detected	Not Detected
Freon 113	0.16	1.2	Not Detected	Not Detected
Methylene Chloride	0.16	0.56	0.35	1.2
1,1-Dichloroethane	0.16	0.65	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.64	Not Detected	Not Detected
Chloroform	0.16	0.78	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.88	0.38	2.1
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.51	0.36	1.2
1,2-Dichloroethane	0.16	0.65	Not Detected	Not Detected
Trichloroethene	0.16	0.86	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.74	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.16	0.73	Not Detected	Not Detected
Toluene	0.16	0.60	1.8	7.0
trans-1,3-Dichloropropane	0.16	0.73	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.88	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.2	Not Detected	Not Detected
Chlorobenzene	0.16	0.74	Not Detected	Not Detected
Ethyl Benzene	0.16	0.70	0.39	1.7
m,p-Xylene	0.16	0.70	1.2	5.4
o-Xylene	0.16	0.70	0.53	2.4
Styrene	0.16	0.68	0.19	0.81
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.79	0.29	1.4
1,2,4-Trimethylbenzene	0.16	0.79	0.83	4.1
1,3-Dichlorobenzene	0.16	0.96	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	0.96	Not Detected	Not Detected
Chlorotoluene	0.16	0.83	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	0.96	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.7	Not Detected	Not Detected
Propylene	0.79	1.4	Not Detected	Not Detected
1,3-Butadiene	0.79	1.8	Not Detected	Not Detected
Acetone	0.79	1.9	4.8	12

AIR TOXICS LTD.

SAMPLE NAME : MPS 03

ID#: 0007117A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071315	Date of Collection:	7/10/00
Dil. Factor:	1.50	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.79	2.5	Not Detected	Not Detected
2-Propanol	0.79	2.0	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.79	3.2	Not Detected	Not Detected
Vinyl Acetate	0.79	2.8	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	2.4	Not Detected	Not Detected
Hexane	0.79	2.8	1.6	5.9
Tetrahydrofuran	0.79	2.4	Not Detected	Not Detected
Cyclohexane	0.79	2.8	Not Detected	Not Detected
1,4-Dioxane	0.79	2.9	Not Detected	Not Detected
Bromodichloromethane	0.79	5.4	Not Detected	Not Detected
4-Methyl-2-pentanone	0.79	3.3	Not Detected	Not Detected
2-Hexanone	0.79	3.3	Not Detected	Not Detected
Dibromochloromethane	0.79	6.8	Not Detected	Not Detected
Bromoform	0.79	6.3	Not Detected	Not Detected
4-Ethyltoluene	0.79	3.9	Not Detected	Not Detected
Ethanol	0.79	1.5	6.8	19
Methyl tert-Butyl Ether	0.79	2.9	Not Detected	Not Detected
Heptane	0.79	3.3	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 04

ID#: 0007117B-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071522	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	2.2	11
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.28	0.60
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	0.32	1.8
1,1-Dichloroethene	0.16	0.66	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	0.36	1.3
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.66	0.22	0.87
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	0.35	2.0
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.53	0.32	1.0
1,2-Dichloroethane	0.16	0.67	Not Detected	Not Detected
Trichloroethene	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	1.2	4.7
trans-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	0.34	1.5
m,p-Xylene	0.16	0.72	1.2	5.5
o-Xylene	0.16	0.72	0.54	2.4
Styrene	0.16	0.71	0.18	0.79
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	0.31	1.5
1,2,4-Trimethylbenzene	0.16	0.82	1.1	5.4
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.86	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.8	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	5.9	14

AIR TOXICS LTD.

SAMPLE NAME : MPS 04

ID#: 0007117B-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071522	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	0.83	2.6
2-Propanol	0.82	2.0	2.7	6.7
trans-1,2-Dichloroethene	0.82	3.3	Not Detected	Not Detected
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	Not Detected	Not Detected
Hexane	0.82	2.9	2.2	8.0
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	0.60	3.0
Ethanol	0.82	1.6	7.4	14
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 05

ID#: 0007117A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071315	Date of Collection:	7/10/00
Dll. Factor:	1.68	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.17	0.84	2.4	12
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.35	0.35	0.74
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.66	Not Detected	Not Detected
Chloroethane	0.17	0.45	Not Detected	Not Detected
Freon 11	0.17	0.96	4.3	24
1,1-Dichloroethane	0.17	0.88	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.59	0.18	0.62
1,1-Dichloroethane	0.17	0.69	Not Detected	Not Detected
cis-1,2-Dichloroethane	0.17	0.68	1.1	4.3
Chloroform	0.17	0.83	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.93	0.27	1.5
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.54	0.45	1.5
1,2-Dichloroethane	0.17	0.69	Not Detected	Not Detected
Trichloroethene	0.17	0.92	0.69	3.8
1,2-Dichloropropane	0.17	0.79	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.17	0.78	Not Detected	Not Detected
Toluene	0.17	0.64	0.98	3.8
trans-1,3-Dichloropropane	0.17	0.78	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	0.20	1.4
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.79	Not Detected	Not Detected
Ethyl Benzene	0.17	0.74	Not Detected	Not Detected
m,p-Xylene	0.17	0.74	0.49	1.9
o-Xylene	0.17	0.74	0.18	0.80
Styrene	0.17	0.73	0.27	1.2
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.84	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.17	0.84	0.37	1.8
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.88	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.84	1.5	Not Detected	Not Detected
1,3-Butadiene	0.84	1.9	Not Detected	Not Detected
Acetone	0.84	2.0	4.8	12

AIR TOXICS LTD.

SAMPLE NAME : MPS 05

ID#: 0007117A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071316	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.84	2.6	Not Detected	Not Detected
2-Propanol	0.84	2.1	Not Detected	Not Detected
trans-1,2-Dichloroethane	0.84	3.4	Not Detected	Not Detected
Vinyl Acetate	0.84	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.5	Not Detected	Not Detected
Hexane	0.84	3.0	1.3	4.7
Tetrahydrofuran	0.84	2.5	Not Detected	Not Detected
Cyclohexane	0.84	2.9	Not Detected	Not Detected
1,4-Dioxane	0.84	3.1	Not Detected	Not Detected
Bromodichloromethane	0.84	5.7	Not Detected	Not Detected
4-Methyl-2-pentanone	0.84	3.5	Not Detected	Not Detected
2-Hexanone	0.84	3.5	Not Detected	Not Detected
Dibromochloromethane	0.84	7.3	Not Detected	Not Detected
Bromoform	0.84	8.8	Not Detected	Not Detected
4-Ethyltoluene	0.84	4.2	Not Detected	Not Detected
Ethanol	0.84	1.6	20	38
Methyl tert-Butyl Ether	0.84	3.1	Not Detected	Not Detected
Heptane	0.84	3.5	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	116	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 06

ID#: 0007117B-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071623	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	2.8	14
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.58	1.2
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	3.4	20
1,1-Dichloroethene	0.16	0.66	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	Not Detected	Not Detected
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.66	2.6	10
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	0.20	1.1
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.53	0.46	1.5
1,2-Dichloroethane	0.16	0.67	Not Detected	Not Detected
Trichloroethane	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	0.78	3.0
trans-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	0.24	1.0
m,p-Xylene	0.16	0.72	0.47	2.1
o-Xylene	0.16	0.72	0.25	1.1
Styrene	0.16	0.71	0.52	2.2
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.16	0.82	0.44	2.2
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.86	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.8	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	4.5	11

AIR TOXICS LTD.

SAMPLE NAME : MPS 06

ID#: 0007117B-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071529	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	Not Detected	Not Detected
2-Propanol	0.82	2.0	1.9	4.7
trans-1,2-Dichloroethene	0.82	3.3	Not Detected	Not Detected
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	1.2	3.6
Hexane	0.82	2.9	Not Detected	Not Detected
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	Not Detected	Not Detected
Ethanol	0.82	1.6	4.1	7.8
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	110	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 07

ID#: 0007117B-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071624	Date of Collection:	7/10/00
Dil. Factor:	1.84	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	2.2	11
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.21	0.44
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	3.4	19
1,1-Dichloroethene	0.16	0.66	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	0.22	0.76
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.66	2.2	9.0
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	0.17	0.84
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.63	0.40	1.3
1,2-Dichloroethane	0.16	0.67	Not Detected	Not Detected
Trichloroethene	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	0.78	3.0
trans-1,3-Dichloropropane	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	0.19	0.85
m,p-Xylene	0.16	0.72	0.43	1.9
o-Xylene	0.16	0.72	0.21	0.92
Styrene	0.16	0.71	0.39	1.7
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.16	0.82	0.39	1.9
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.86	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.8	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	3.6	8.6

AIR TOXICS LTD.

SAMPLE NAME : MPS 07

ID#: 0007117B-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071524	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	1.4	4.3
2-Propanol	0.82	2.0	1.4	3.4
trans-1,2-Dichloroethene	0.82	3.3	Not Detected	Not Detected
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	Not Detected	Not Detected
Hexane	0.82	2.9	6.4	19
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	Not Detected	Not Detected
Ethanol	0.82	1.6	4.8	9.2
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 09

ID#: 0007117B-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071525	Date of Collection:	7/10/00
Dil. Factor:	1.58	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.79	0.84	4.2
Freon 114	0.16	1.1	Not Detected	Not Detected
Chloromethane	0.16	0.33	0.47	0.98
Vinyl Chloride	0.16	0.41	Not Detected	Not Detected
Bromomethane	0.16	0.62	Not Detected	Not Detected
Chloroethane	0.16	0.42	0.16	0.43
Freon 11	0.16	0.90	0.46	2.6
1,1-Dichloroethene	0.16	0.64	Not Detected	Not Detected
Freon 113	0.16	1.2	Not Detected	Not Detected
Methylene Chloride	0.16	0.56	Not Detected	Not Detected
1,1-Dichloroethane	0.16	0.65	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.64	5.0	20
Chloroform	0.16	0.78	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.88	Not Detected	Not Detected
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.51	0.68	2.2
1,2-Dichloroethane	0.16	0.65	Not Detected	Not Detected
Trichloroethene	0.16	0.86	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.74	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.16	0.73	Not Detected	Not Detected
Toluene	0.16	0.60	1.6	6.1
trans-1,3-Dichloropropane	0.16	0.73	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.88	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.2	Not Detected	Not Detected
Chlorobenzene	0.16	0.74	Not Detected	Not Detected
Ethyl Benzene	0.16	0.70	Not Detected	Not Detected
m,p-Xylene	0.16	0.70	1.5	6.7
o-Xylene	0.16	3.70	0.67	3.0
Styrene	0.16	0.68	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.79	0.34	1.7
1,2,4-Trimethylbenzene	0.16	0.79	1.8	9.1
1,3-Dichlorobenzene	0.16	0.96	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	0.96	Not Detected	Not Detected
Chlorotoluene	0.16	0.83	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	0.86	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.7	Not Detected	Not Detected
Propylene	0.79	1.4	Not Detected	Not Detected
1,3-Butadiene	0.79	1.8	Not Detected	Not Detected
Acetone	0.79	1.9	10	24

AIR TOXICS LTD.

SAMPLE NAME : MPS 09

ID#: 0007117B-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071525	Date of Collection:	7/10/00
Dil. Factor:	1.58	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.79	2.5	Not Detected	Not Detected
2-Propanol	0.79	2.0	1.8	4.1
trans-1,2-Dichloroethane	0.79	3.2	Not Detected	Not Detected
Vinyl Acetate	0.79	2.8	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	2.4	3.3	9.9
Hexane	0.79	2.8	3.2	11
Tetrahydrofuran	0.79	2.4	Not Detected	Not Detected
Cyclohexane	0.79	2.8	Not Detected	Not Detected
1,4-Dioxane	0.79	2.9	7.7	28
Bromodichloromethane	0.79	5.4	Not Detected	Not Detected
4-Methyl-2-pentanone	0.79	3.3	Not Detected	Not Detected
2-Hexanone	0.79	3.3	Not Detected	Not Detected
Dibromochloromethane	0.79	6.8	Not Detected	Not Detected
Bromoform	0.79	8.3	Not Detected	Not Detected
4-Ethyltoluene	0.79	3.9	0.82	4.1
Ethanol	0.79	1.5	6.9	13
Methyl tert-Butyl Ether	0.79	2.9	Not Detected	Not Detected
Heptane	0.79	3.3	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 11

ID#: 0007117B-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071525	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	0.85	4.3
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.64	1.4
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	0.28	1.8
1,1-Dichloroethene	0.16	0.86	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	0.30	1.0
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.16	0.66	2.0	8.1
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.53	0.67	2.2
1,2-Dichloroethane	0.16	0.87	Not Detected	Not Detected
Trichloroethene	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	0.49	1.9
trans-1,3-Dichloropropene	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethene	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	Not Detected	Not Detected
m,p-Xylene	0.16	0.72	Not Detected	Not Detected
o-Xylene	0.16	0.72	Not Detected	Not Detected
Styrene	0.16	0.71	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.16	0.82	Not Detected	Not Detected
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.86	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.8	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	15	36

AIR TOXICS LTD.

SAMPLE NAME : MPS 11

ID#: 0007117B-09A

RPA METHOD TO-14 GC/MS Full Scan

File Name:	1071526	Date of Collection:	7/10/00
Dil. Factor:	1.54	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	0.90	2.9
2-Propanol	0.82	2.0	3.1	7.8
trans-1,2-Dichloroethene	0.82	3.3	0.32	1.3
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	1.6	4.9
Hexane	0.82	2.9	14	51
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	Not Detected	Not Detected
Ethanol	0.82	1.6	18	35
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 12

ID#: 0007117B-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071527	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.17	0.84	0.94	4.7
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.95	1.4	2.8
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.66	Not Detected	Not Detected
Chloroethane	0.17	0.45	Not Detected	Not Detected
Freon 11	0.17	0.96	0.31	1.8
1,1-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.59	0.38	1.4
1,1-Dichloroethane	0.17	0.69	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.17	0.68	0.72	2.9
Chloroform	0.17	0.83	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.54	1.2	3.8
1,2-Dichloroethane	0.17	0.69	Not Detected	Not Detected
Trichloroethene	0.17	0.92	Not Detected	Not Detected
1,2-Dichloropropane	0.17	0.79	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
Toluene	0.17	0.64	3.3	13
trans-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	Not Detected	Not Detected
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.79	Not Detected	Not Detected
Ethyl Benzene	0.17	0.74	1.3	5.7
m,p-Xylene	0.17	0.74	4.2	18
o-Xylene	0.17	0.74	1.5	6.5
Styrene	0.17	0.73	0.24	1.0
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.84	0.45	2.2
1,2,4-Trimethylbenzene	0.17	0.84	1.4	7.2
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.88	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.84	1.5	Not Detected	Not Detected
1,3-Butadiene	0.84	1.9	Not Detected	Not Detected
Acetone	0.84	2.0	18	44

AIR TOXICS LTD.

SAMPLE NAME : MPS 12

ID#: 0007117B-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071827	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/18/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.84	2.6	Not Detected	Not Detected
2-Propanol	0.84	2.1	4.2	10
trans-1,2-Dichloroethene	0.84	3.4	Not Detected	Not Detected
Vinyl Acetate	0.84	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.5	1.4	4.3
Hexane	0.84	3.0	1.8	6.6
Tetrahydrofuran	0.84	2.5	Not Detected	Not Detected
Cyclohexane	0.84	2.9	Not Detected	Not Detected
1,4-Dioxane	0.84	3.1	1.9	7.1
Bromodichloromethane	0.84	5.7	Not Detected	Not Detected
4-Methyl-2-pentanone	0.84	3.5	Not Detected	Not Detected
2-Hexanone	0.84	3.5	Not Detected	Not Detected
Dibromochloromethane	0.84	7.3	Not Detected	Not Detected
Bromoform	0.84	8.8	Not Detected	Not Detected
4-Ethyltoluene	0.84	4.2	1.0	5.0
Ethanol	0.84	1.6	19	37
Methyl tert-Butyl Ether	0.84	3.1	Not Detected	Not Detected
Heptane	0.84	3.5	0.90	3.8

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 13

ID#: 0007117A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071317	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.16	0.82	0.83	4.2
Freon 114	0.16	1.2	Not Detected	Not Detected
Chloromethane	0.16	0.34	0.34	0.71
Vinyl Chloride	0.16	0.43	Not Detected	Not Detected
Bromomethane	0.16	0.65	Not Detected	Not Detected
Chloroethane	0.16	0.44	Not Detected	Not Detected
Freon 11	0.16	0.94	0.42	2.4
1,1-Dichloroethane	0.16	0.66	Not Detected	Not Detected
Freon 113	0.16	1.3	Not Detected	Not Detected
Methylene Chloride	0.16	0.58	0.21	0.75
1,1-Dichloroethane	0.16	0.67	Not Detected	Not Detected
cis-1,2-Dichloroethane	0.16	0.66	4.1	17
Chloroform	0.16	0.81	Not Detected	Not Detected
1,1,1-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Carbon Tetrachloride	0.16	1.0	Not Detected	Not Detected
Benzene	0.16	0.53	0.57	1.8
1,2-Dichloroethane	0.16	0.67	Not Detected	Not Detected
Trichloroethane	0.16	0.90	Not Detected	Not Detected
1,2-Dichloropropane	0.16	0.77	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.16	0.76	Not Detected	Not Detected
Toluene	0.16	0.63	1.8	6.7
trans-1,3-Dichloropropane	0.16	0.76	Not Detected	Not Detected
1,1,2-Trichloroethane	0.16	0.91	Not Detected	Not Detected
Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
Ethylene Dibromide	0.16	1.3	Not Detected	Not Detected
Chlorobenzene	0.16	0.77	Not Detected	Not Detected
Ethyl Benzene	0.16	0.72	0.16	0.81
m,p-Xylene	0.16	0.72	0.64	2.8
o-Xylene	0.16	0.72	0.24	1.1
Styrene	0.16	0.71	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.16	1.1	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.16	0.82	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.16	0.82	0.37	1.8
1,3-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
Chlorotoluene	0.16	0.86	Not Detected	Not Detected
1,2-Dichlorobenzene	0.16	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.16	1.2	Not Detected	Not Detected
Hexachlorobutadiene	0.16	1.8	Not Detected	Not Detected
Propylene	0.82	1.4	Not Detected	Not Detected
1,3-Butadiene	0.82	1.8	Not Detected	Not Detected
Acetone	0.82	2.0	5.5	13

AIR TOXICS LTD.

SAMPLE NAME : MPS 13

ID#: 0007117A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071317	Date of Collection:	7/10/00
Dil. Factor:	1.64	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.82	2.6	Not Detected	Not Detected
2-Propanol	0.82	2.0	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.82	3.3	Not Detected	Not Detected
Vinyl Acetate	0.82	2.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	2.4	0.92	2.8
Hexane	0.82	2.9	Not Detected	Not Detected
Tetrahydrofuran	0.82	2.4	Not Detected	Not Detected
Cyclohexane	0.82	2.9	Not Detected	Not Detected
1,4-Dioxane	0.82	3.0	Not Detected	Not Detected
Bromodichloromethane	0.82	5.6	Not Detected	Not Detected
4-Methyl-2-pentanone	0.82	3.4	Not Detected	Not Detected
2-Hexanone	0.82	3.4	Not Detected	Not Detected
Dibromochloromethane	0.82	7.1	Not Detected	Not Detected
Bromoform	0.82	8.6	Not Detected	Not Detected
4-Ethyltoluene	0.82	4.1	Not Detected	Not Detected
Ethanol	0.82	1.6	8.6	16
Methyl tert-Butyl Ether	0.82	3.0	Not Detected	Not Detected
Heptane	0.82	3.4	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 14

ID#: 0007117B-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071528	Date of Collection:	7/10/00
Dil. Factor:	1.88	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.17	0.84	1.3	6.4
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.35	0.79	1.6
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.66	Not Detected	Not Detected
Chloroethane	0.17	0.45	Not Detected	Not Detected
Freon 11	0.17	0.96	0.35	2.0
1,1-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.59	0.45	1.6
1,1-Dichloroethane	0.17	0.69	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Chloroform	0.17	0.83	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.93	0.37	2.1
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.54	0.66	2.1
1,2-Dichloroethane	0.17	0.69	Not Detected	Not Detected
Trichloroethene	0.17	0.92	Not Detected	Not Detected
1,2-Dichloropropane	0.17	0.79	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
Toluene	0.17	0.84	2.9	11
trans-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	Not Detected	Not Detected
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.79	Not Detected	Not Detected
Ethyl Benzene	0.17	0.74	0.48	2.1
m,p-Xylene	0.17	0.74	1.4	6.0
o-Xylene	0.17	0.74	0.43	1.9
Styrene	0.17	0.73	0.27	1.2
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.84	0.35	1.8
1,2,4-Trimethylbenzene	0.17	0.84	1.2	5.8
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.88	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.84	1.5	Not Detected	Not Detected
1,3-Butadiene	0.84	1.9	Not Detected	Not Detected
Acetone	0.84	2.0	11	26

AIR TOXICS LTD.

SAMPLE NAME : MPS 14

ID#: 0007117B-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071528	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.84	2.6	1.1	3.4
2-Propanol	0.84	2.1	2.8	6.9
trans-1,2-Dichloroethene	0.84	3.4	Not Detected	Not Detected
Vinyl Acetate	0.84	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.5	0.85	2.5
Hexane	0.84	3.0	3.0	11
Tetrahydrofuran	0.84	2.5	Not Detected	Not Detected
Cyclohexane	0.84	2.9	Not Detected	Not Detected
1,4-Dioxane	0.84	3.1	Not Detected	Not Detected
Bromodichloromethane	0.84	5.7	Not Detected	Not Detected
4-Methyl-2-pentanone	0.84	3.5	Not Detected	Not Detected
2-Hexanone	0.84	3.5	Not Detected	Not Detected
Dibromochloromethane	0.84	7.3	Not Detected	Not Detected
Bromoform	0.84	8.8	Not Detected	Not Detected
4-Ethyltoluene	0.84	4.2	Not Detected	Not Detected
Ethanol	0.84	1.6	16	31
Methyl tert-Butyl Ether	0.84	3.1	Not Detected	Not Detected
Heptane	0.84	3.5	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	110	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 15

ID#: 0007117B-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	107152B	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.17	0.84	1.3	6.4
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.35	0.80	1.7
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.66	Not Detected	Not Detected
Chloroethane	0.17	0.45	Not Detected	Not Detected
Freon 11	0.17	0.96	0.53	3.0
1,1-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.59	1.6	5.8
1,1-Dichloroethane	0.17	0.69	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Chloroform	0.17	0.83	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.93	10	55
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.54	1.1	3.6
1,2-Dichloroethane	0.17	0.69	Not Detected	Not Detected
Trichloroethene	0.17	0.92	Not Detected	Not Detected
1,2-Dichloropropane	0.17	0.79	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
Toluene	0.17	0.64	4.4	17
trans-1,3-Dichloropropene	0.17	0.78	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	0.22	1.5
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.79	0.26	1.2
Ethyl Benzene	0.17	0.74	0.78	3.4
m,p-Xylene	0.17	0.74	2.8	12
o-Xylene	0.17	0.74	0.96	4.2
Styrene	0.17	0.73	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.84	0.38	1.9
1,2,4-Trimethylbenzene	0.17	0.84	0.93	4.6
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.88	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.84	1.5	Not Detected	Not Detected
1,3-Butadiene	0.84	1.9	Not Detected	Not Detected
Acetone	0.84	2.0	16	38

AIR TOXICS LTD.

SAMPLE NAME : MPS 15

ID#: 0007117B-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071529	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.84	2.6	0.85	2.7
2-Propanol	0.84	2.1	5.3	13
trans-1,2-Dichloroethene	0.84	3.4	Not Detected	Not Detected
Vinyl Acetate	0.84	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.5	1.7	5.0
Hexane	0.84	3.0	2.9	10
Tetrahydrofuran	0.84	2.5	Not Detected	Not Detected
Cyclohexane	0.84	2.9	Not Detected	Not Detected
1,4-Dioxane	0.84	3.1	Not Detected	Not Detected
Bromodichloromethane	0.84	5.7	Not Detected	Not Detected
4-Methyl-2-pentanone	0.84	3.5	Not Detected	Not Detected
2-Hexanone	0.84	3.5	Not Detected	Not Detected
Dibromochloromethane	0.84	7.3	Not Detected	Not Detected
Bromoform	0.84	8.8	Not Detected	Not Detected
4-Ethyltoluene	0.84	4.2	0.99	4.9
Ethanol	0.84	1.6	19	37
Methyl tert-Butyl Ether	0.84	3.1	Not Detected	Not Detected
Heptane	0.84	3.5	3.3	14

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 16

ID#: 0007117B-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071630	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (ug/m3)	Amount (ppbv)	Amount (ug/m3)
Freon 12	0.17	0.84	1.1	5.6
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.35	0.93	2.0
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.66	Not Detected	Not Detected
Chloroethane	0.17	0.45	Not Detected	Not Detected
Freon 11	0.17	0.96	0.50	2.9
1,1-Dichloroethene	0.17	0.68	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.59	0.74	2.6
1,1-Dichloroethane	0.17	0.69	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.17	0.68	0.20	0.82
Chloroform	0.17	0.83	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.93	1.2	6.8
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.54	0.93	3.0
1,2-Dichloroethane	0.17	0.89	Not Detected	Not Detected
Trichloroethene	0.17	0.92	Not Detected	Not Detected
1,2-Dichloropropane	0.17	0.79	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.17	0.78	Not Detected	Not Detected
Toluene	0.17	0.64	5.5	21
trans-1,3-Dichloropropane	0.17	0.78	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.93	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	0.34	2.3
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.79	Not Detected	Not Detected
Ethyl Benzene	0.17	0.74	0.71	3.1
m,p-Xylene	0.17	0.74	2.9	13
o-Xylene	0.17	0.74	0.84	3.7
Styrene	0.17	0.73	0.18	0.77
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.84	0.30	1.5
1,2,4-Trimethylbenzene	0.17	0.84	0.96	4.9
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.88	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.84	1.5	Not Detected	Not Detected
1,3-Butadiene	0.84	1.9	Not Detected	Not Detected
Acetone	0.84	2.0	22	54

AIR TOXICS LTD.

SAMPLE NAME : MPS 16

ID#: 0007117B-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071530	Date of Collection:	7/10/00
Dil. Factor:	1.68	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.84	2.6	Not Detected	Not Detected
2-Propanol	0.84	2.1	4.5	11
trans-1,2-Dichloroethene	0.84	3.4	Not Detected	Not Detected
Vinyl Acetate	0.84	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	2.5	2.8	8.4
Hexane	0.84	3.0	2.3	8.2
Tetrahydrofuran	0.84	2.5	Not Detected	Not Detected
Cyclohexane	0.84	2.9	Not Detected	Not Detected
1,4-Dioxane	0.84	3.1	Not Detected	Not Detected
Bromodichloromethane	0.84	5.7	Not Detected	Not Detected
4-Methyl-2-pentanone	0.84	3.5	Not Detected	Not Detected
2-Hexanone	0.84	3.5	Not Detected	Not Detected
Dibromochloromethane	0.84	7.3	Not Detected	Not Detected
Bromoform	0.84	8.8	Not Detected	Not Detected
4-Ethyltoluene	0.84	4.2	Not Detected	Not Detected
Ethanol	0.84	1.6	26	50
Methyl tert-Butyl Ether	0.84	3.1	Not Detected	Not Detected
Heptane	0.84	3.5	6.4	27

Container Type: 5 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 17

ID#: 0007117B-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071531	Date of Collection:	7/10/00
Dil. Factor:	1.71	Date of Analysis:	7/15/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.17	0.86	1.3	6.6
Freon 114	0.17	1.2	Not Detected	Not Detected
Chloromethane	0.17	0.36	0.91	1.9
Vinyl Chloride	0.17	0.44	Not Detected	Not Detected
Bromomethane	0.17	0.67	Not Detected	Not Detected
Chloroethane	0.17	0.46	Not Detected	Not Detected
Freon 11	0.17	0.98	0.52	3.0
1,1-Dichloroethene	0.17	0.69	Not Detected	Not Detected
Freon 113	0.17	1.3	Not Detected	Not Detected
Methylene Chloride	0.17	0.60	0.83	2.9
1,1-Dichloroethane	0.17	0.70	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.17	0.69	0.20	0.82
Chloroform	0.17	0.85	Not Detected	Not Detected
1,1,1-Trichloroethane	0.17	0.95	1.2	6.6
Carbon Tetrachloride	0.17	1.1	Not Detected	Not Detected
Benzene	0.17	0.56	0.94	3.0
1,2-Dichloroethane	0.17	0.70	Not Detected	Not Detected
Trichloroethene	0.17	0.93	Not Detected	Not Detected
1,2-Dichloropropane	0.17	0.80	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.17	0.79	Not Detected	Not Detected
Toluene	0.17	0.65	3.2	12
trans-1,3-Dichloropropene	0.17	0.79	Not Detected	Not Detected
1,1,2-Trichloroethane	0.17	0.95	Not Detected	Not Detected
Tetrachloroethene	0.17	1.2	Not Detected	Not Detected
Ethylene Dibromide	0.17	1.3	Not Detected	Not Detected
Chlorobenzene	0.17	0.80	Not Detected	Not Detected
Ethyl Benzene	0.17	0.75	0.72	3.2
m,p-Xylene	0.17	0.75	2.6	11
o-Xylene	0.17	0.75	0.88	3.9
Styrene	0.17	0.74	0.19	0.82
1,1,2,2-Tetrachloroethane	0.17	1.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.17	0.85	0.47	2.4
1,2,4-Trimethylbenzene	0.17	0.85	1.6	7.8
1,3-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
Chlorotoluene	0.17	0.90	Not Detected	Not Detected
1,2-Dichlorobenzene	0.17	1.0	Not Detected	Not Detected
1,2,4-Trichlorobenzene	0.17	1.3	Not Detected	Not Detected
Hexachlorobutadiene	0.17	1.8	Not Detected	Not Detected
Propylene	0.86	1.5	Not Detected	Not Detected
1,3-Butadiene	0.86	1.9	Not Detected	Not Detected
Acetone	0.86	2.1	7.7	19

AIR TOXICS LTD.

SAMPLE NAME : MPS 17

ID#: 0007117B-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071531	Date of Collection:	7/10/00
Dil. Factor:	1.71	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	0.86	2.7	Not Detected	Not Detected
2-Propanol	0.86	2.1	2.8	6.9
trans-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Vinyl Acetate	0.86	3.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	2.6	1.5	4.4
Hexane	0.86	3.1	1.3	4.5
Tetrahydrofuran	0.86	2.6	Not Detected	Not Detected
Cyclohexane	0.86	3.0	Not Detected	Not Detected
1,4-Dioxane	0.86	3.1	Not Detected	Not Detected
Bromodichloromethane	0.86	5.8	Not Detected	Not Detected
4-Methyl-2-pentanone	0.86	3.6	Not Detected	Not Detected
2-Hexanone	0.86	3.6	Not Detected	Not Detected
Dibromochloromethane	0.86	7.4	Not Detected	Not Detected
Bromoform	0.86	9.0	Not Detected	Not Detected
4-Ethyltoluene	0.86	4.3	0.96	4.8
Ethanol	0.86	1.6	27	51
Methyl tert-Butyl Ether	0.86	3.1	Not Detected	Not Detected
Heptane	0.86	3.6	1.0	4.3

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 18

ID#: 0007117B-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071532	Date of Collection:	7/10/00
Dil. Factor:	1.75	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.18	0.88	0.78	3.9
Freon 114	0.18	1.2	Not Detected	Not Detected
Chloromethane	0.18	0.37	2.0	4.2
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	0.18	1.0
1,1-Dichloroethane	0.18	0.70	Not Detected	Not Detected
Freon 113	0.18	1.4	Not Detected	Not Detected
Methylene Chloride	0.18	0.62	0.38	1.3
1,1-Dichloroethane	0.18	0.72	Not Detected	Not Detected
cis-1,2-Dichloroethane	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	1.4	4.4
1,2-Dichloroethane	0.18	0.72	1.1	4.4
Trichloroethene	0.18	0.96	Not Detected	Not Detected
1,2-Dichloropropane	0.18	0.82	Not Detected	Not Detected
cis-1,3-Dichloropropane	0.18	0.81	Not Detected	Not Detected
Toluene	0.18	0.67	2.8	11
trans-1,3-Dichloropropane	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	1.2	5.4
Ethyl Benzene	0.18	0.77	Not Detected	Not Detected
m,p-Xylene	0.18	0.77	0.59	2.6
o-Xylene	0.18	0.77	Not Detected	Not Detected
Styrene	0.18	0.76	Not Detected	Not Detected
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	0.34	1.7
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	4.4	11

AIR TOXICS LTD.

SAMPLE NAME : MPS 18

ID#: 0007117B-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071532	Date of Collection:	7/10/00
Dil. Factor:	1.76	Date of Analysis:	7/16/00

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	1.2	3.1
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	Not Detected	Not Detected
Hexane	0.88	3.1	Not Detected	Not Detected
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	1.6	5.9
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	Not Detected	Not Detected
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	3.3	6.3
Methyl tert-Butyl Ether	0.88	3.2	Not Detected	Not Detected
Heptane	0.88	3.6	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS 19

ID#: 0007117B-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	t071533	Date of Collection:	7/10/00
Dil. Factor:	1.75	Date of Analysis:	7/16/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.18	0.88	0.82	4.1
Freon 114	0.18	1.2	Not Detected	Not Detected
Chloromethane	0.18	0.37	1.0	2.1
Vinyl Chloride	0.18	0.45	Not Detected	Not Detected
Bromomethane	0.18	0.68	Not Detected	Not Detected
Chloroethane	0.18	0.47	Not Detected	Not Detected
Freon 11	0.18	1.0	Not Detected	Not Detected
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	0.82	0.28	0.99
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	0.80	2.6
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-Dichloropropane	0.18	0.81	Not Detected	Not Detected
Toluene	0.18	0.67	2.7	10
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	0.23	1.1
Ethyl Benzene	0.18	0.77	Not Detected	Not Detected
m,p-Xylene	0.18	0.77	0.54	2.4
o-Xylene	0.18	0.77	0.18	0.81
Styrene	0.18	0.76	Not Detected	Not Detected
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	0.26	1.3
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	10	25

AIR TOXICS LTD.

SAMPLE NAME : MPS 19

ID#: 0007117B-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071533	Date of Collection:	7/10/00
Dil. Factor:	1.75	Date of Analysis:	7/16/00

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	2.0	4.9
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	Not Detected	Not Detected
Hexane	0.88	3.1	Not Detected	Not Detected
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	0.89	3.6
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	Not Detected	Not Detected
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	4.8	9.3
Methyl tert-Butyl Ether	0.88	3.2	Not Detected	Not Detected
Heptane	0.88	3.6	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 0007117B-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071518	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/16/00

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	0.67	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#: 0007117B-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071518	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/16/00

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

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130



WORK ORDER #: 0007120

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. #

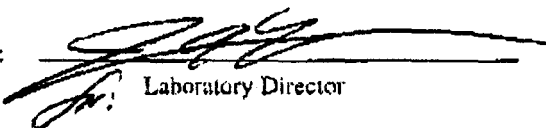
FAX: 414-768-7158

PROJECT # 3125 MPS

DATE RECEIVED: 7/11/00

DATE COMPLETED: 7/25/00

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	MPS-VP1	TO-14-S	8.5 "Hg
02A	MPS-VP2	TO-14-S	8.0 "Hg
03A	MPS-VP3	TO-14-S	9.0 "Hg
04A	Lab Blank	TO-14-S	NA

CERTIFIED BY: 
Laboratory Director

DATE: 7/25/00

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# 0007120

Three 6 Liter Summa Canister samples were received on July 11, 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	Nation 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.

<i>Requirement</i>	<i>TO-14 Low Level</i>	<i>ATL Modifications</i>
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

Hexane is "E" flagged in sample MPS-VP1.

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-VP1

ID#: 0007120-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072017	Date of Collection:	7/18/00
Dil. Factor:	4680	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (ug/m3)	Amount (ppbv)	Amount (ug/m3)
Freon 12	470	2400	Not Detected	Not Detected
Freon 114	470	3300	Not Detected	Not Detected
Chloromethane	470	980	Not Detected	Not Detected
Vinyl Chloride	470	1200	Not Detected	Not Detected
Bromomethane	470	1800	Not Detected	Not Detected
Chloroethane	470	1200	Not Detected	Not Detected
Freon 11	470	2700	Not Detected	Not Detected
1,1-Dichloroethane	470	1900	Not Detected	Not Detected
Freon 113	470	3600	Not Detected	Not Detected
Methylene Chloride	470	1600	Not Detected	Not Detected
1,1-Dichloroethane	470	1900	Not Detected	Not Detected
cis-1,2-Dichloroethane	470	1900	Not Detected	Not Detected
Chloroform	470	2300	Not Detected	Not Detected
1,1,1-Trichloroethane	470	2600	Not Detected	Not Detected
Carbon Tetrachloride	470	3000	Not Detected	Not Detected
Benzene	470	1500	Not Detected	Not Detected
1,2-Dichloroethane	470	1900	Not Detected	Not Detected
Trichloroethane	470	2600	Not Detected	Not Detected
1,2-Dichloropropane	470	2200	Not Detected	Not Detected
cis-1,3-Dichloropropene	470	2200	Not Detected	Not Detected
Toluene	470	1800	Not Detected	Not Detected
trans-1,3-Dichloropropene	470	2200	Not Detected	Not Detected
1,1,2-Trichloroethane	470	2600	Not Detected	Not Detected
Tetrachloroethane	470	3200	Not Detected	Not Detected
Ethylene Dibromide	470	3600	Not Detected	Not Detected
Chlorobenzene	470	2200	Not Detected	Not Detected
Ethyl Benzene	470	2100	Not Detected	Not Detected
m,p-Xylene	470	2100	Not Detected	Not Detected
o-Xylene	470	2100	Not Detected	Not Detected
Styrene	470	2000	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	470	3300	Not Detected	Not Detected
1,3,5-Trimethylbenzene	470	2300	Not Detected	Not Detected
1,2,4-Trimethylbenzene	470	2300	Not Detected	Not Detected
1,3-Dichlorobenzene	470	2900	Not Detected	Not Detected
1,4-Dichlorobenzene	470	2900	Not Detected	Not Detected
Chlorotoluene	470	2500	Not Detected	Not Detected
1,2-Dichlorobenzene	470	2800	Not Detected	Not Detected
1,2,4-Trichlorobenzene	470	3500	Not Detected	Not Detected
Hexachlorocyclopentadiene	470	5100	Not Detected	Not Detected
Propylene	2300	4100	Not Detected	Not Detected
1,3-Butadiene	2300	5300	Not Detected	Not Detected
Acetone	2300	5600	Not Detected	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : MPS-VP1

ID#: 0007120-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072017	Date of Collection:	7/10/00
Dil. Factor:	4680	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	2300	7400	Not Detected	Not Detected
2-Propanol	2300	5800	Not Detected	Not Detected
trans-1,2-Dichloroethene	2300	9400	Not Detected	Not Detected
Vinyl Acetate	2300	8400	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2300	7000	Not Detected	Not Detected
Hexane	2300	8400	210000 E	740000 E
Tetrahydrofuran	2300	7000	Not Detected	Not Detected
Cyclohexane	2300	8200	Not Detected	Not Detected
1,4-Dioxane	2300	8600	Not Detected	Not Detected
Bromodichloromethane	2300	16000	Not Detected	Not Detected
4-Methyl-2-pentanone	2300	9700	Not Detected	Not Detected
2-Hexanone	2300	9700	Not Detected	Not Detected
Dibromochloromethane	2300	20000	Not Detected	Not Detected
Bromoform	2300	24000	Not Detected	Not Detected
4-Ethyltoluene	2300	12000	Not Detected	Not Detected
Ethanol	2300	4500	Not Detected	Not Detected
Methyl tert-Butyl Ether	2300	8600	Not Detected	Not Detected
Heptane	2300	8700	Not Detected	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS-VP2

ID#: 0007120-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072019	Date of Collection:	7/10/00
Dil. Factor:	2290000	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	230000	1200000	Not Detected	Not Detected
Freon 114	230000	1600000	Not Detected	Not Detected
Chloromethane	230000	480000	Not Detected	Not Detected
Vinyl Chloride	230000	590000	Not Detected	Not Detected
Bromomethane	230000	900000	Not Detected	Not Detected
Chloroethane	230000	610000	Not Detected	Not Detected
Freon 11	230000	1300000	Not Detected	Not Detected
1,1-Dichloroethane	230000	920000	Not Detected	Not Detected
Freon 113	230000	1800000	Not Detected	Not Detected
Methylene Chloride	230000	810000	1700000	6200000
1,1-Dichloroethane	230000	940000	Not Detected	Not Detected
cis-1,2-Dichloroethane	230000	920000	Not Detected	Not Detected
Chloroform	230000	1100000	Not Detected	Not Detected
1,1,1-Trichloroethane	230000	1300000	Not Detected	Not Detected
Carbon Tetrachloride	230000	1500000	Not Detected	Not Detected
Benzene	230000	740000	Not Detected	Not Detected
1,2-Dichloroethane	230000	940000	Not Detected	Not Detected
Trichloroethane	230000	1200000	Not Detected	Not Detected
1,2-Dichloropropane	230000	1100000	Not Detected	Not Detected
cis-1,3-Dichloropropene	230000	1000000	Not Detected	Not Detected
Toluene	230000	880000	Not Detected	Not Detected
trans-1,3-Dichloropropene	230000	1000000	Not Detected	Not Detected
1,1,2-Trichloroethane	230000	1300000	Not Detected	Not Detected
Tetrachloroethane	230000	1800000	Not Detected	Not Detected
Ethylene Dibromide	230000	1800000	Not Detected	Not Detected
Chlorobenzene	230000	1100000	Not Detected	Not Detected
Ethyl Benzene	230000	1000000	Not Detected	Not Detected
m,p-Xylene	230000	1000000	Not Detected	Not Detected
o-Xylene	230000	1000000	Not Detected	Not Detected
Styrene	230000	990000	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	230000	1600000	Not Detected	Not Detected
1,3,5-Trimethylbenzene	230000	1100000	Not Detected	Not Detected
1,2,4-Trimethylbenzene	230000	1100000	Not Detected	Not Detected
1,3-Dichlorobenzene	230000	1400000	Not Detected	Not Detected
1,4-Dichlorobenzene	230000	1400000	Not Detected	Not Detected
Chlorotoluene	230000	1200000	Not Detected	Not Detected
1,2-Dichlorobenzene	230000	1400000	Not Detected	Not Detected
1,2,4-Trichlorobenzene	230000	1700000	Not Detected	Not Detected
Hexachlorobutadiene	230000	2500000	Not Detected	Not Detected
Propylene	1100000	2000000	Not Detected	Not Detected
1,3-Butadiene	1100000	2600000	Not Detected	Not Detected
Acetone	1100000	2800000	Not Detected	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : MPS-VP2

ID#: 0007120-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072019	Date of Collection:	7/10/00
Dil. Factor:	2280000	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Carbon Disulfide	1100000	3600000	Not Detected	Not Detected
2-Propanol	1100000	2900000	Not Detected	Not Detected
trans-1,2-Dichloroethene	1100000	4600000	Not Detected	Not Detected
Vinyl Acetate	1100000	4100000	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1100000	3400000	Not Detected	Not Detected
Hexane	1100000	4100000	60000000	220000000
Tetrahydrofuran	1100000	3400000	Not Detected	Not Detected
Cyclohexane	1100000	4000000	Not Detected	Not Detected
1,4-Dioxane	1100000	4200000	Not Detected	Not Detected
Bromodichloromethane	1100000	7800000	Not Detected	Not Detected
4-Methyl-2-pentanone	1100000	4800000	Not Detected	Not Detected
2-Hexanone	1100000	4800000	Not Detected	Not Detected
Dibromochloromethane	1100000	9900000	Not Detected	Not Detected
Bromoform	1100000	12000000	Not Detected	Not Detected
4-Ethyltoluene	1100000	5700000	Not Detected	Not Detected
Ethanol	1100000	2200000	Not Detected	Not Detected
Methyl tert-Butyl Ether	1100000	4200000	Not Detected	Not Detected
Heptane	1100000	4800000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME : MPS-VP3

ID#: 0007120-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072018	Date of Collection:	7/10/00
Oil: Factor:	9550	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	960	4800	Not Detected	Not Detected
Freon 114	960	6600	Not Detected	Not Detected
Chloromethane	960	2000	Not Detected	Not Detected
Vinyl Chloride	960	2500	Not Detected	Not Detected
Bromomethane	960	3800	Not Detected	Not Detected
Chloroethane	960	2600	Not Detected	Not Detected
Freon 11	960	5400	Not Detected	Not Detected
1,1-Dichloroethane	960	3800	Not Detected	Not Detected
Freon 113	960	7400	Not Detected	Not Detected
Methylene Chloride	960	3400	3400	12000
1,1-Dichloroethane	960	3900	Not Detected	Not Detected
cis-1,2-Dichloroethane	960	3800	Not Detected	Not Detected
Chloroform	960	4700	Not Detected	Not Detected
1,1,1-Trichloroethane	960	5300	Not Detected	Not Detected
Carbon Tetrachloride	960	6100	Not Detected	Not Detected
Benzene	960	3100	Not Detected	Not Detected
1,2-Dichloroethane	960	3900	Not Detected	Not Detected
Trichloroethene	960	5200	Not Detected	Not Detected
1,2-Dichloropropane	960	4500	Not Detected	Not Detected
cis-1,3-Dichloropropene	960	4400	Not Detected	Not Detected
Toluene	960	3600	Not Detected	Not Detected
trans-1,3-Dichloropropene	960	4400	Not Detected	Not Detected
1,1,2-Trichloroethane	960	5300	Not Detected	Not Detected
Tetrachloroethene	960	6600	Not Detected	Not Detected
Ethylene Dibromide	960	7400	Not Detected	Not Detected
Chlorobenzene	960	4500	Not Detected	Not Detected
Ethyl Benzene	960	4200	Not Detected	Not Detected
m,p-Xylene	960	4200	Not Detected	Not Detected
o-Xylene	960	4200	Not Detected	Not Detected
Styrene	960	4100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	960	6700	Not Detected	Not Detected
1,3,5-Trimethylbenzene	960	4800	Not Detected	Not Detected
1,2,4-Trimethylbenzene	960	4800	Not Detected	Not Detected
1,3-Dichlorobenzene	960	5800	Not Detected	Not Detected
1,4-Dichlorobenzene	960	5800	Not Detected	Not Detected
Chlorotoluene	960	5000	Not Detected	Not Detected
1,2-Dichlorobenzene	960	5800	Not Detected	Not Detected
1,2,4-Trichlorobenzene	960	7200	Not Detected	Not Detected
Hexachlorobutadiene	960	10000	Not Detected	Not Detected
Propylene	4800	8400	Not Detected	Not Detected
1,3-Butadiene	4800	11000	Not Detected	Not Detected
Acetone	4800	12000	Not Detected	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : MPS-VP3

ID#: 0007120-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072018	Date of Collection:	7/10/00
Dil. Factor:	9550	Date of Analysis:	7/20/00

Compound	Det. Limit (ppbv)	Det. Limit (ug/m3)	Amount (ppbv)	Amount (ug/m3)
Carbon Disulfide	4800	15000	Not Detected	Not Detected
2-Propanol	4800	12000	6000	15000
trans-1,2-Dichloroethene	4800	19000	Not Detected	Not Detected
Vinyl Acetate	4800	17000	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4800	14000	Not Detected	Not Detected
Hexane	4800	17000	320000	1100000
Tetrahydrofuran	4800	14000	Not Detected	Not Detected
Cyclohexane	4800	17000	Not Detected	Not Detected
1,4-Dioxane	4800	17000	Not Detected	Not Detected
Bromodichloromethane	4800	32000	Not Detected	Not Detected
4-Methyl-2-pentanone	4800	20000	Not Detected	Not Detected
2-Hexanone	4800	20000	Not Detected	Not Detected
Dibromochloromethane	4800	41000	Not Detected	Not Detected
Bromoform	4800	50000	Not Detected	Not Detected
4-Ethyltoluene	4800	24000	Not Detected	Not Detected
Ethanol	4800	9100	Not Detected	Not Detected
Methyl tert-Butyl Ether	4800	17000	Not Detected	Not Detected
Heptane	4800	20000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 0007117A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071314	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/13/00

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#: 0007117A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071314	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/13/00

Compound	Det. Limit (ppbv)	Det. Limit (µG/m3)	Amount (ppbv)	Amount (µG/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	1.9	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

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 0007120-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072008	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/20/00

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

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 0007120-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1072008	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/20/00

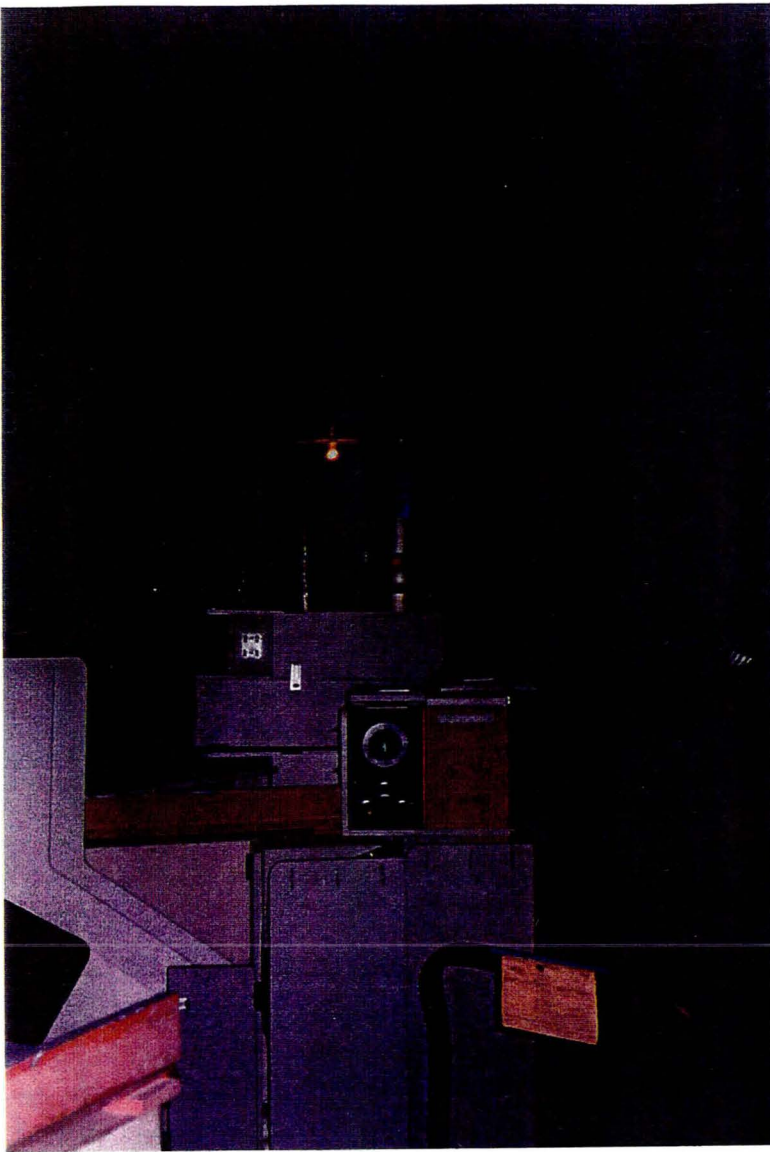
Compound	Det. Limit (ppbv)	Det. Limit (uG/m3)	% Recovery
Carbon Disulfide	0.50	1.6	Not Detected
2-Propanol	0.50	1.2	Not Detected
trans-1,2-Dichloroethene	0.50	2.0	Not Detected
Vinyl Acetate	0.50	1.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	1.5	Not Detected
Hexane	0.50	1.8	Not Detected
Tetrahydrofuran	0.50	1.5	Not Detected
Cyclohexane	0.50	1.7	Not Detected
1,4-Dioxane	0.50	1.8	Not Detected
Bromodichloromethane	0.50	3.4	Not Detected
4-Methyl-2-pentanone	0.50	2.1	Not Detected
2-Hexanone	0.50	2.1	Not Detected
Dibromochloromethane	0.50	4.3	Not Detected
Bromoform	0.50	5.2	Not Detected
4-Ethyltoluene	0.50	2.5	Not Detected
Ethanol	0.50	0.96	Not Detected
Methyl tert-Butyl Ether	0.50	1.8	Not Detected
Heptane	0.50	2.1	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

ATTACHMENT D

PHOTOGRAPHS OF AIR SAMPLE LOCATIONS



MPS - 01



MPS - 02



MPS-03

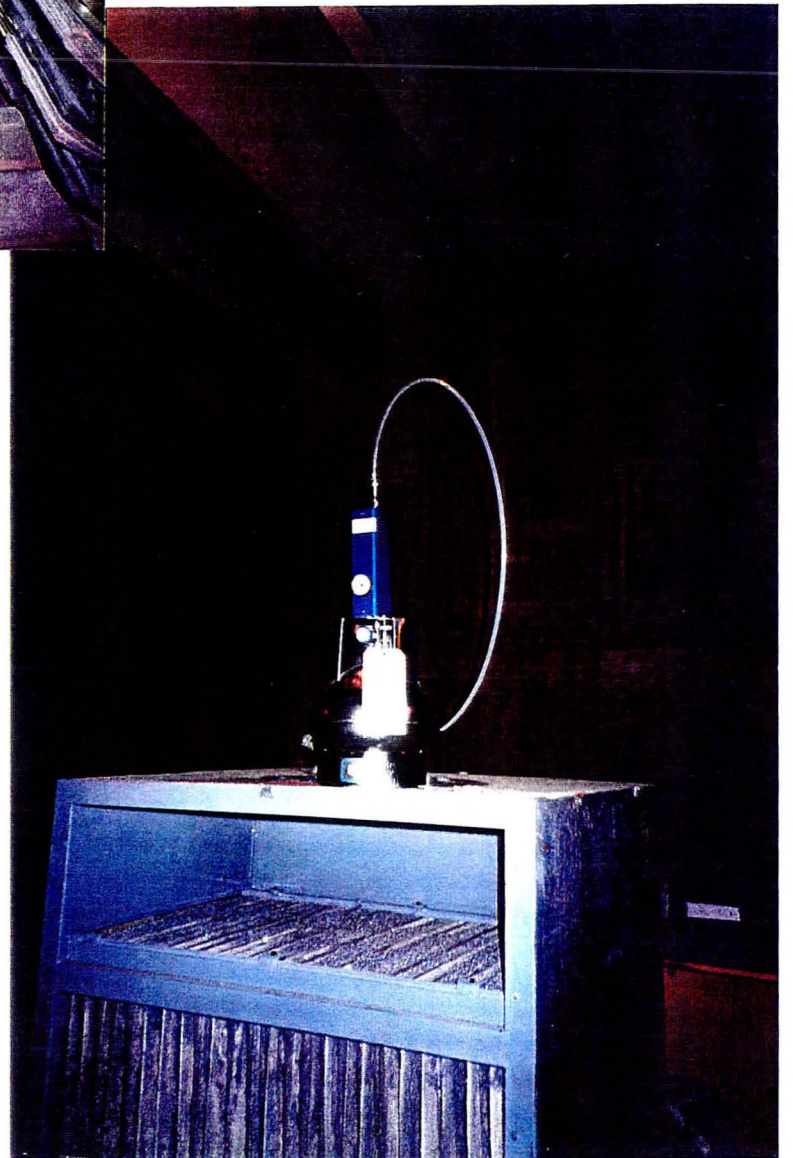


MPS-04



MPS - 05

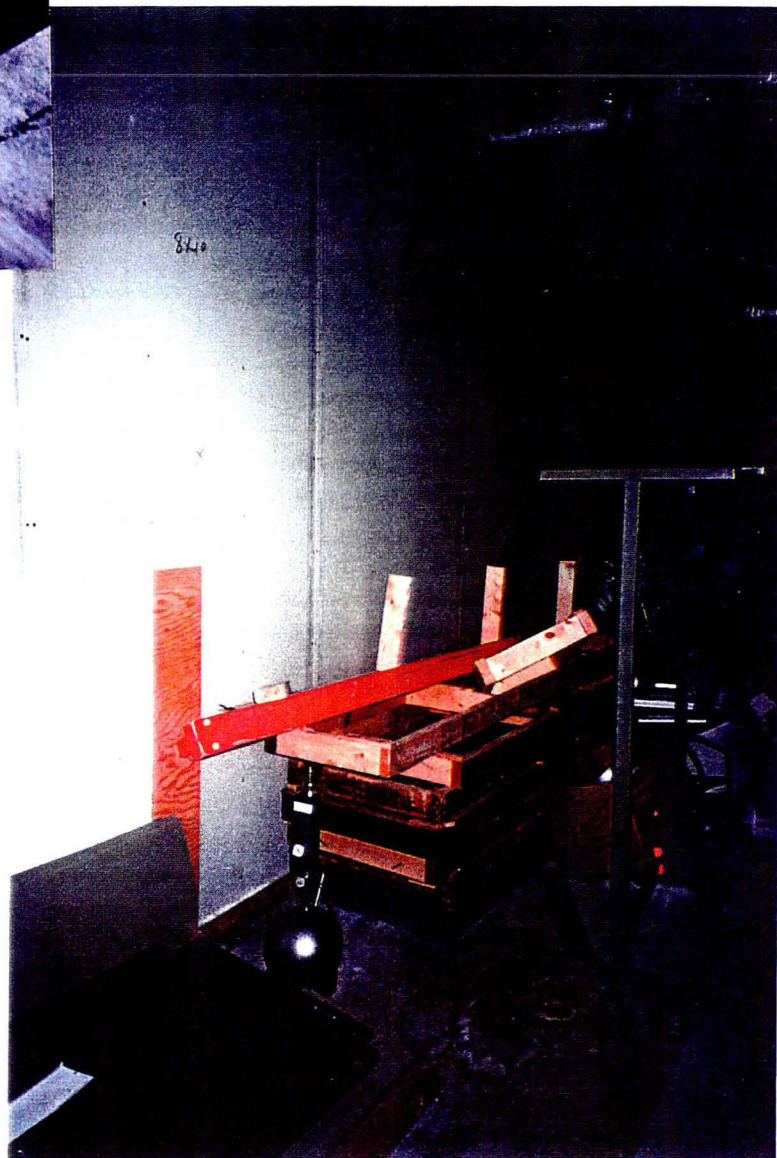
MPS - 06



MPS-07

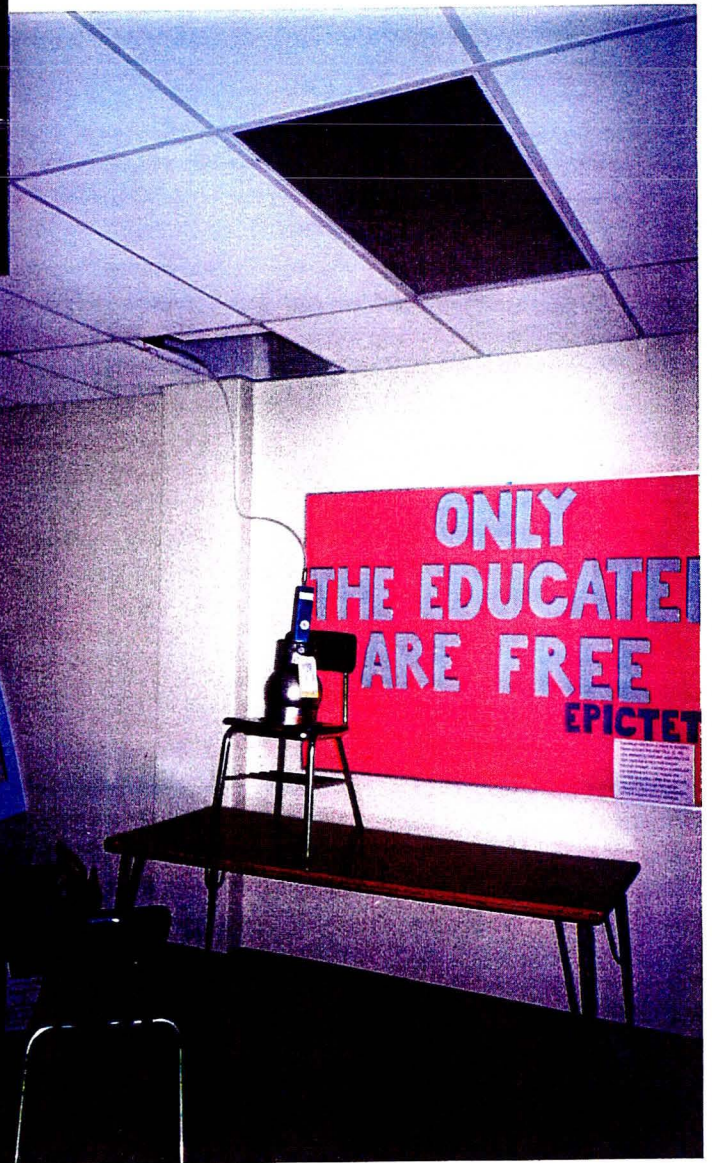


MPS-09





MPS-13



MPS-11



MPS-12



MPS-14



MPS-15



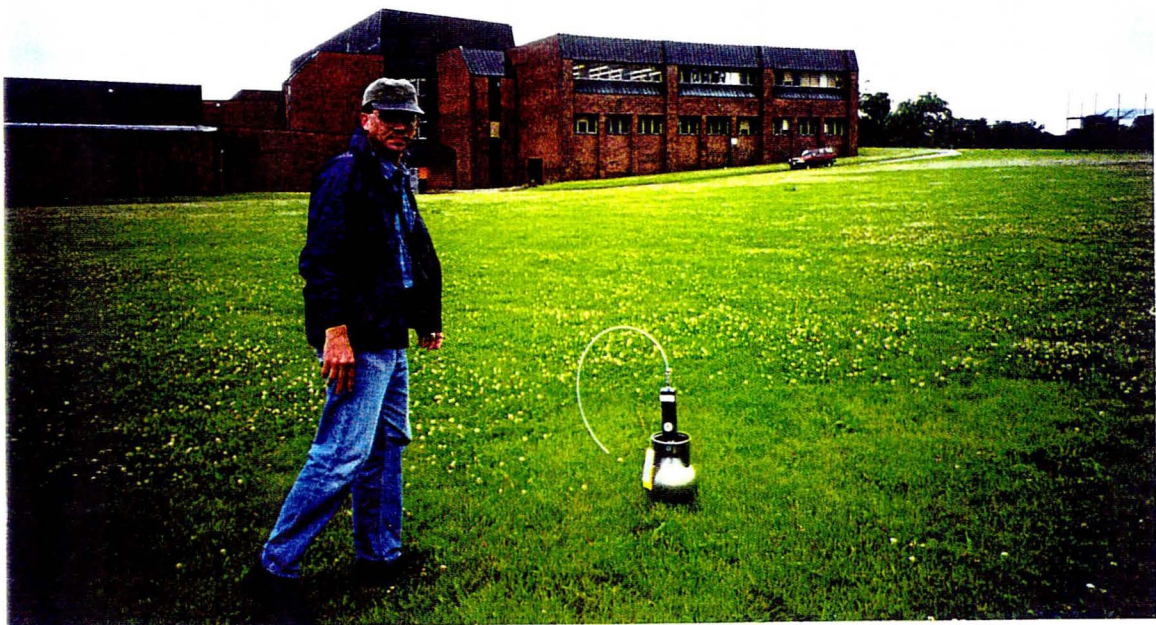
MPS-16



MPS-17



MPS-18



MPS-19

ATTACHMENT E
CHAIN-OF-CUSTODY RECORDS

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline: (800) 467-4922

180 BLUE RAVINE ROAD, SUITE 8
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Contact Person Mafizul Islam
 Company Sigma Environmental Services, Inc.
 Address 220 E. River Rd City Oak Creek State WI Zip 53154
 Phone (414) 768-7147 FAX (414) 768-7158
 Collected By: Signature [Signature]

Project info:
 P.O. # _____
 Project # 3125
 Project Name MPS

Turn Around Time:
 Normal
 Flush 43h
 Specify _____

Lab ID	Field Sample I.D.	Date & Time (mm)		Analyses Requested	Canister Pressure / Vacuum		
					Initial	Final	Receipt
01A	MPS 01	7/10/00	85mm	TQ-14-S	28.0	7.0	4.0 ^{1/2} g
02A	MPS 02		79mm		27.0	4.5	5.5 ^{1/2} g
	MPS 03		79		26.5	4.5	
04A	MPS 04		83		24.0	5.0	5.5 ^{1/2} g
	MPS 05		76		28	5.5	
06A	MPS 06		83		23.5	5.0	5.5 ^{1/2} g
07A	MPS 07		82		28.5	5.0	5.5 ^{1/2} g
	MPS 08			VOID			
08A	MPS 09		66		19.0	3.0	4.5 ^{1/2} g
	MPS 10			VOID			

Relinquished By: (Signature) [Signature] Date/Time 7/10/00
 Relinquished By: (Signature) [Signature] Date/Time 7/10/00
 Relinquished By: (Signature) [Signature] Date/Time 7/10/00

Notes:
 Ken Analysis on Field ID #'s
 MPS 05, MPS 03, MPS 09 only.
 all others at Normal TAT.

Lab Use Only
 Shipper Name FedEx Air Bill # 807332857435 Opened By: [Signature] Temp. (°C) 9.0 Condition good Custody Seals Intact? Yes No None Work Order # 0007117AR

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

160 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Contact Person Mafizul Islam
 Company Sigma Environmental Services, Inc
 Address 270 Ryan Road city Cock Creek State VA zip 23157
 Phone (414) 763-7144 FAX (414) 763-7153
 Collected By: Signature [Signature]

Project info:
 P.O. # _____
 Project # 3125
 Project Name MPS

Turn Around Time:
 Normal
 Rush _____ Specify _____

Lab I.D.	Field Sample I.D.	Date & Time (m.m.)	Analyses Requested	Matrix	Canister Pressure / Vacuum		
					Initial	Final	Residue
-09A	MPS 11	7/10/00 78min	TO-14-S	indoor air	28.5	5.5	5.9"Hg
-10A	MPS 12	79			29.5	5.5	6.0"Hg
	MPS 13	75min			29.0	5.0	
-12A	MPS 14	79			29.0	6.0	6.0"Hg
-13A	MPS 15	78			29.0	5.5	6.0"Hg
-14A	MPS 16	75			28.0	5.5	6.0"Hg
-15A	MPS 17	75			29.5	5.6	6.5"Hg
-16A	MPS 18	71		outdoor air	29.5	6.0	7.0"Hg
-17A	MPS 19	72			29.5	7.0	7.0"Hg

Relinquished By: (Signature) [Signature] Date/Time 7/10/00 10:15am
 Received By: (Signature) [Signature] Date/Time _____
 Relinquished By: (Signature) _____ Date/Time _____
 Received By: (Signature) [Signature] Date/Time 7-11-00 9:10
 Relinquished By: (Signature) _____ Date/Time _____
 Received By: (Signature) _____ Date/Time _____

Notes: Rush analyses on Field ID # MPS 13 only. Others at normal T.A.T

Shipper Name FedEx Air Bill # 80733157430 Opened By: [Signature] Temp. (°C) ambient Condition good Custody Seals Intact? Yes No None Work Order # 0007117AS

ATTACHMENT F

SOIL BORING/GEOPROBE WELL CONSTRUCTION LOGS

- Route To:
- Solid Waste
 - Emergency Response
 - Wastewater
 - Superfund
 - Haz. Waste
 - Underground Tanks
 - Water Resources
 - Other _____

Facility/Project Name Whitefish Bay Landfill		License/Permit/Monitoring Number		Boring Number VP-1	
Boring Drilled By (Firm name and name of crew chief) Marty Nessman - Sigma Environmental Tony Kapugi - On-site Environmental			Date Drilling Started 07 / 06 / 00 MM DD YY	Date Drilling Completed 07 / 06 / 00 MM DD YY	Drilling Method Geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name VP-1	Final Static Water Level _____ Feet MSL	Surface Elevation _____ Feet MSL	Borehole Diameter 3.00 inches
Boring Location State Plane _____ N, _____ E S SE 1/4 of NW 1/4 of Section 23 , T 8 N, R 21 E			Local Grid Location (If applicable) Lat _____ ° ' " <input type="checkbox"/> N <input type="checkbox"/> E Long _____ ° ' " <input type="checkbox"/> S <input type="checkbox"/> W		
County Milwaukee		DNR County Code 41	Civil Town/City/ or Village City of Milwaukee		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	48		0.0 to 4.0	Clayey SILT, brown (10YR5/3:D), trace gravel.	ML			0		Dry				No Odor
2	48		4.0 to 8.0	Same as above in top 36" over a sandy silt with gravel, brown.	ML			0		D				No Odor
3	36		8.0 to 11.0	Same as above with soem sandy silt in bottom 12". End of boring.	ML			0		M				No Odor

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Marty Nessman* Firm **Sigma Environmental Services, Inc.**
220 E. Ryan Road, Oak Creek, WI 53154 (414) 768-7144

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Facility/Project Name Whitefish Bay Landfill	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name VP-1
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. _____ Long. _____ or _____	Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed 0 7 / 0 6 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ft. _____	Section Location of Waste/Source SE 1/4 of NW 1/4 of Sec. 23, T. 8 N, R. 21 <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.	Well Installed By: (Person's Name and Firm) Marty Nessman - Sigma Environmental
Is Well A Point of Enforcement Std. Application? <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Tony Kapugi - On-site Environmental

- A. Protective pipe, top elevation _____ ft. MSL
- B. Well casing, top elevation _____ ft. MSL
- C. Land surface elevation _____ ft. MSL
- D. Surface seal, bottom _____ ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

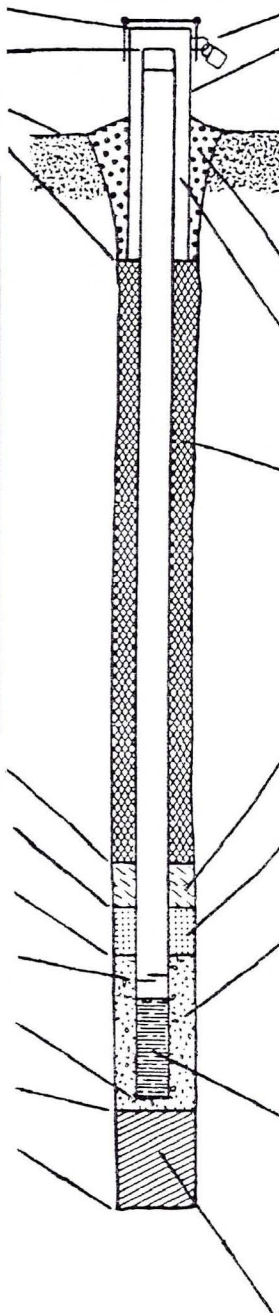
13. Sieve analysis attached? Yes No

14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
Geoprobe Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No
 Describe _____

17. Source of water (attach analysis):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: **6.00** in.
 - b. Length: **1.5** ft.
 - c. Material: Steel 04
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 30
Concrete 01
Other
- 4. Material between well casing and protective pipe: Bentonite 30
Annular space seal
Other
- 5. Annular space seal:
 - a. Granular Bentonite 33
 - b. _____ Lbs/gal mud weight..Bentonite-sand slurry 35
 - c. _____ Lbs/gal mud weight Bentonite slurry 31
 - d. _____ % Bentonite Bentonite-cement grout 50
 - e. _____ Ft³ volume added for any of the above
 - f. How installed: Tremie 01
Tremie pumped 02
Gravity 08
- 6. Bentonite seal:
 - a. Bentonite granules 33
 - b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
 - c. _____ Other
- 7. Fine sand material: Manufacturer, product name & mesh size
 - a. _____
 - b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 - a. **#30 Red Flint**
 - b. Volume added _____ ft³
- 9. Well casing: Flush threaded PVC schedule 40 23
 Flush threaded PVC schedule 80 24
Galvanized Steel Other
- 10. Screen material: **Galvanized Steel**
 - a. Screen type: Factory cut 11
Continuous slot 01
Other
 - b. Manufacturer _____
 - c. Slot size: _____ in.
 - d. Slotted length: **3.0** ft.
- 11. Backfill material (below filter pack): None 14
Other

- E. Bentonite seal, top _____ ft. MSL or **1.0** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **7.0** ft.
- H. Screen joint, top _____ ft. MSL or **8.0** ft.
- I. Well bottom _____ ft. MSL or **11.0** ft.
- J. Filter pack, bottom _____ ft. MSL or **11.0** ft.
- K. Borehole, bottom _____ ft. MSL or **11.0** ft.
- L. Borehole, diameter **3.00** in.
- M. O.D. well casing **1.50** in.
- N. I.D. well casing **1.40** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Marty Nessman* Firm **Sigma Environmental Services, Inc.**
 220 E. Ryan Road, Oak Creek, WI 53154 (414) 768-7144

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144, 147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144, Wis Stats, failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Facility/Project Name Whitefish Bay Landfill		License/Permit/Monitoring Number	Boring Number VP-2	
Boring Drilled By (Firm name and name of crew chief) Marty Nessman - Sigma Environmental Tony Kapugi - On-site Environmental		Date Drilling Started 07 / 06 / 00 M M D D Y Y	Date Drilling Completed 07 / 06 / 00 M M D D Y Y	Drilling Method Geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name VP-2	Final Static Water Level _____ Feet MSL	Surface Elevation _____ Feet MSL
Boring Location State Plane _____ N, _____ E S SE 1/4 of NW 1/4 of Section 23, T 8 N, R 21 E		Local Grid Location (If applicable) Lat _____ ' " <input type="checkbox"/> N <input type="checkbox"/> E Long _____ ' " _____ Feet <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W		
County Milwaukee		DNR County Code 41	Civil Town/City/ or Village City of Milwaukee	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	48		0.0 to 4.0	12" of topsoil over Cayey silt, brown (10YR5/3:D).	ML			0		D				No Odor
2	18		4.0 to 8.0	Same as above. Poor recovery due to rock in tip.	ML			0		D				No Odor
3	12		8.0 to 11.0	Same as above. Poor recovery due to rock in tip. End of boring.	ML			0		D				No Odor

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Marty Nessman* Firm **Sigma Environmental Services, Inc.**
220 E. Ryan Road, Oak Creek, WI 53154 (414) 768-7144

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Facility/Project Name Whitefish Bay Landfill	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name VP-2
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source SE 1/4 of NW 1/4 of Sec. 23 , T. 8 N, R. 21 <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.	Date Well Installed 0 7 / 0 6 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ft. <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By: (Person's Name and Firm) Marty Nessman - Sigma Environmental Tony Kapugi - On-site Environmental

- A. Protective pipe, top elevation _____ ft. MSL
- B. Well casing, top elevation _____ ft. MSL
- C. Land surface elevation _____ ft. MSL
- D. Surface seal, bottom _____ ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

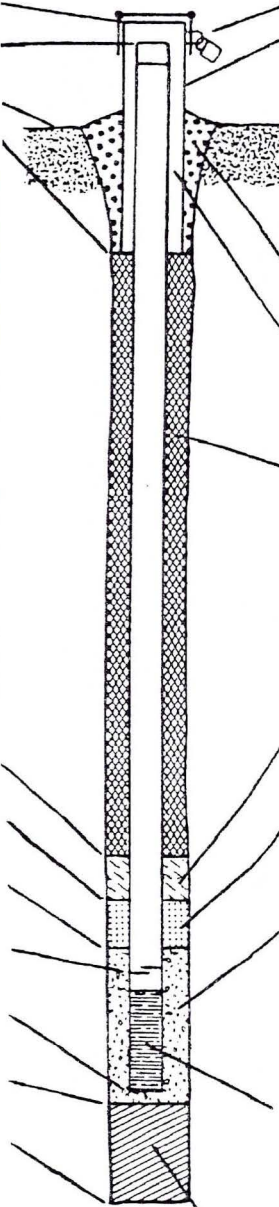
13. Sieve analysis attached? Yes No

14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
Geoprobe Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No
 Describe _____

17. Source of water (attach analysis):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: **6.00** in.
 - b. Length: **1.5** ft.
 - c. Material: Steel 04
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 30
Concrete 01
Other
- 4. Material between well casing and protective pipe: Bentonite 30
Annular space seal
Other
- 5. Annular space seal: a. Granular Bentonite 33
b. _____ Lbs/gal mud weight..Bentonite-sand slurry 35
c. _____ Lbs/gal mud weight Bentonite slurry 31
d. _____ % Bentonite Bentonite-cement grout 50
e. _____ Ft³ volume added for any of the above
f. How installed: Tremie 01
Tremie pumped 02
Gravity 08
- 6. Bentonite seal: a. Bentonite granules 33
b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
c. _____ Other
- 7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. **#30 Red Flint**
b. Volume added _____ ft³
- 9. Well casing: Flush threaded PVC schedule 40 23
Flush threaded PVC schedule 80 24
Galvanized Steel Other
- 10. Screen material: **Galvanized Steel**
a. Screen type: Factory cut 11
Continuous slot 01
Other
b. Manufacturer _____
c. Slot size: _____ in.
d. Slotted length: **3.0** ft.
- 11. Backfill material (below filter pack): None 14
Other

- E. Bentonite seal, top _____ ft. MSL or **1.0** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **7.0** ft.
- H. Screen joint, top _____ ft. MSL or **8.0** ft.
- I. Well bottom _____ ft. MSL or **11.0** ft.
- J. Filter pack, bottom _____ ft. MSL or **11.0** ft.
- K. Borehole, bottom _____ ft. MSL or **11.0** ft.
- L. Borehole, diameter **3.00** in.
- M. O.D. well casing **1.50** in.
- N. I.D. well casing **1.40** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Marty Nessman* Firm **Sigma Environmental Services, Inc.**
220 E. Ryan Road, Oak Creek, WI 53154 (414) 768-7144

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144, 147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144, Wis Stats, failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Facility/Project Name Whitefish Bay Landfill		License/Permit/Monitoring Number	Boring Number VP-3	
Boring Drilled By (Firm name and name of crew chief) Marty Nessman - Sigma Environmental Tony Kapugi - On-site Environmental		Date Drilling Started <u>07 / 06 / 00</u> MM DD YY	Date Drilling Completed <u>07 / 06 / 00</u> MM DD YY	Drilling Method Geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name VP-3	Final Static Water Level _____ Feet MSL	Surface Elevation _____ Feet MSL
Boring Location State Plane _____ N, _____ E S		Lat _____ ° ' "	Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W	
SE 1/4 of NW 1/4 of Section <u>23</u> , T <u>8</u> N, R <u>21</u> E		Long _____ ° ' "	_____ Feet	
County Milwaukee		DNR County Code 41	Civil Town/City/ or Village City of Milwaukee	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					ROD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	48		0.0 to 4.0	Silty CLAY, brown (10YR5/3:D), trace gravel and organics.	CL			0		D				No Odor
2	24		4.0 to 8.0	Same as above. Poor recovery due to rock at 5'.	CL			0		M				No Odor
3	36		8.0 to 11.0	Same as above.	CL			0		D				No Odor
			11.0 to 12.0	End of boring.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Marty Nessman* Firm **Sigma Environmental Services, Inc.**
220 E. Ryan Road, Oak Creek, WI 53154 (414) 768-7144

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Facility/Project Name Whitefish Bay Landfill	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name VP-3
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. _____ Long. _____ or _____	Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed 0 7 / 0 6 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary _____ ft.	Section Location of Waste/Source SE 1/4 of NW 1/4 of Sec. 23 , T. 8 N, R. 21 <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.	Well Installed By: (Person's Name and Firm) Marty Nessman - Sigma Environmental
Is Well A Point of Enforcement Std. Application? <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Tony Kapugi - On-site Environmental

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

13. Sieve analysis attached? Yes No

14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
Geoprobe Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No
 Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or **1.0** ft.

F. Fine sand, top _____ ft. MSL or _____ ft.

G. Filter pack, top _____ ft. MSL or **7.0** ft.

H. Screen joint, top _____ ft. MSL or **8.0** ft.

I. Well bottom _____ ft. MSL or **11.0** ft.

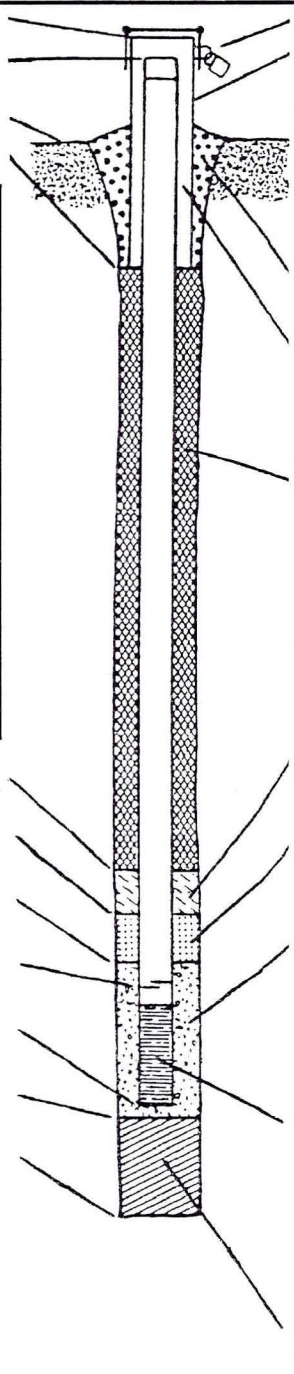
J. Filter pack, bottom _____ ft. MSL or **11.0** ft.

K. Borehole, bottom _____ ft. MSL or **11.0** ft.

L. Borehole, diameter **3.00** in.

M. O.D. well casing **1.50** in.

N. I.D. well casing **1.40** in.



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 a. Granular Bentonite 33
 b. _____ Lbs/gal mud weight..Bentonite-sand slurry 35
 c. _____ Lbs/gal mud weight Bentonite slurry 31
 d. _____ % Bentonite Bentonite-cement grout 50
 e. _____ Ft³ volume added for any of the above
 f. How installed: Tremie 01
 Tremie pumped 02
 Gravity 08

6. Bentonite seal:
 a. Bentonite granules 33
 b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
 c. _____ Other

7. Fine sand material: Manufacturer, product name & mesh size
 a. _____
 b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
 a. **#30 Red Flint**
 b. Volume added _____ ft³

9. Well casing: Flush threaded PVC schedule 40 23
 Flush threaded PVC schedule 80 24
Galvanized Steel Other

10. Screen material: **Galvanized Steel**
 a. Screen type: Factory cut 11
 Continuous slot 01
 Other
 b. Manufacturer _____
 c. Slot size: _____ in.
 d. Slotted length: **3.0** ft.

11. Backfill material (below filter pack): None 14
 Other

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: _____ Firm: **Sigma Environmental Services, Inc.**
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