

VOLUME II

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GROUNDWATER ANALYTICAL DATA

AUGUST 1994 SAMPLING EVENT

MEMORANDUM

TO: Norseland Project QA Record

October 3, 1994

FR: Sandra Schildt, Golder Associates Inc. *(initials)*

RE: ORGANICS ANALYSES DATA VALIDATION SUMMARY FOR DATA PACKAGE: I072
(933-1280, Filename NOR072.VOA)

INTRODUCTION

This memorandum presents the results of data validation on data package I072 prepared by Analytical Resources, Inc. (ARI). A list of the samples validated along with the analytes reported and the method of analysis is provided in the following table.

SAMPLE ID	SAMPLE DATE	MEDIA	ANALYSIS
MW-1	8/12/94	WATER	SEE NOTE 1
MW-2	8/11/94	WATER	
MW-3	8/10/94	WATER	

Note 1: All samples were analyzed for CLP Target Compound List (TCL) volatiles (method 8260), semivolatiles (method 8270), and pesticide/PCBs (method 8081).

Data validation was conducted in accordance with the RI/FS work plan (Golder 1993) and EPA validation procedures (Bleyler 1988). Attachments 1 through 5 to this memo provide the following information:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced validation criteria.

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met.

Detection Limits. Detection limit goals were met for all analyses with the exception of the following pesticide/PCB compounds: methoxychlor, toxaphene, aroclor-1016/1242, aroclor-1248, aroclor-1254, aroclor-1221, and aroclor-1232. No action was required.

Completeness. The data package was complete for all requested analyses.

MAJOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of the data as unusable.

MINOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of the data as unusable.

REFERENCES

Bleyer 1988, Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1, 1988. U.S. Environmental Protection Agency, Washington D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, July 27, 1993. Golder Associates, Redmond, Washington.

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected in the associated laboratory blank. This qualifier is applied by the laboratory. During the process of data validation this qualifier may be replaced by other appropriate qualifiers as defined by the validation procedures. The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- NJ - Indicates presumptive evidence of a constituent at an estimated value. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- N - Indicates presumptive evidence of a constituent. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- JN - Indicates a tentatively identified compound (TIC) whose concentration and identification have been determined to be valid as a result of data validation. The associated data should be considered usable for decision making purposes.
- UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected due to associated blank contamination.
- UR - Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY - FORM B-7

ATTACHMENT 3

ANNOTATED LABORATORY REPORTS

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 2



Sample No: MW-1

Lab Sample ID: I072A	QC Report No: I072-Golder Associates
LIMS ID: 94-13424	Project: Norseland
Matrix: Water	933-1280
Data Release Authorized: <i>BVB</i>	Date Sampled: 08/12/94
Reported: 08/26/94	Date Received: 08/12/94
Instrument: FINN3	
Date Analyzed: 08/22/94	
Sample Amount: 5.00 mL	

ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

JES-49

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: MW-1

Lab Sample ID: I072A QC Report No: I072-Golder Associates
LIMS ID: 94-13424 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *GWL* Date Sampled: 08/12/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

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Analytical
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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	92.6%
d8-Toluene	99.7%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	97.2%

[Signature]
8/25/94

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
Page 1 of 2



Sample No: MW-2

Lab Sample ID: I072B
LIMS ID: 94-13425
Matrix: Water
Data Release Authorized: *✓*
Reported: 08/26/94

QC Report No: I072-Golder Associates
Project: Norseland
933-1280
Date Sampled: 08/11/94
Date Received: 08/12/94

Instrument: FINN3
Date Analyzed: 08/22/94

Sample Amount: 5.00 mL

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloroproppane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

4/21/94
9/20/94

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: MW-2

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Lab Sample ID: I072B QC Report No: I072-Golder Associates
LIMS ID: 94-13425 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *JMF* Date Sampled: 08/11/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.2%
d8-Toluene	100%
Bromofluorobenzene	95.7%
d4-1,2-Dichlorobenzene	101%

*AP/1
9/20/94*

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 2



Sample No: MW-3

Lab Sample ID: I072C QC Report No: I072-Golder Associates
LIMS ID: 94-13426 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *SAC* Date Sampled: 08/10/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

Abi
9/20/94

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: MW-3

Lab Sample ID: I072C QC Report No: I072-Golder Associates
LIMS ID: 94-13426 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *JMB* Date Sampled: 08/10/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.0%
d8-Toluene	101%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	104%

4/20/94
9/20/94

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 2



Sample No: Trip Blank

Lab Sample ID: I072G QC Report No: I072-Golder Associates
LIMS ID: 94-13430 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *BNS* Date Sampled: 08/02/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

*Alt 1
9/26/94*

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: Trip Blank

Lab Sample ID: I072G QC Report No: I072-Golder Associates
LIMS ID: 94-13430 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *JWS* Date Sampled: 08/02/94
Reported: 08/26/94 Date Received: 08/12/94

Instrument: FINN3 Sample Amount: 5.00 mL
Date Analyzed: 08/22/94

ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1, 2-Dichlorobenzene	1.0 U
541-73-1	1, 3-Dichlorobenzene	1.0 U
106-46-7	1, 4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	91.5%
d8-Toluene	99.7%
Bromofluorobenzene	93.8%
d4-1,2-Dichlorobenzene	101%

AB
9/20/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Sample No: MW-2

Lab Sample ID: I072B
LIMS ID: 94-13425
Matrix: Water
Data Release Authorized: *BWB*
Reported: 08/29/94

QC Report No: I072-Golder Associates
Project: Norseland
933-1280
Date Sampled: 08/11/94
Date Received: 08/12/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94
Date analyzed: 08/26/94
Instrument: NT1

Sample Amount: 1000 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	2.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U

ACD
7/20/94



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Sample No: MW-1

ANALYTICAL
RESOURCES
INCORPORATEDAnalytical
Chemists &
Consultants333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)Lab Sample ID: I072A
LIMS ID: 94-13424
Matrix: Water
Data Release Authorized: *BNS*
Reported: 08/29/94QC Report No: I072-Golder Associates
Project: Norseland
933-1280
Date Sampled: 08/12/94
Date Received: 08/12/94Date extracted: 08/15/94
Date analyzed: 08/26/94
Instrument: NT1Sample Amount: 1000 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	2.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U

*A/HG
9/26/94*



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS

Page 2 of 2

Sample No: MW-1

Analytical
Chemists &
Consultants

Lab Sample ID: I072A
LIMS ID: 94-13424
Matrix: Water
Data Release Authorized: ANS
Reported: 08/29/94

QC Report No: I072-Golder Associates
Project: Norseland
933-1280
Date Sampled: 08/12/94
Date Received: 08/12/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94

Sample Amount: 1000 mL

Date analyzed: 08/26/94

Final Extract Volume: 1.0 mL

Instrument: NT1

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	54
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	5.0
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	74.9%	d5-Phenol	22.6%
2-Fluorobiphenyl	68.9%	2-Fluorophenol	27.1%
d14-p-Terphenyl	94.4%	2,4,6-Tribromophenol	74.3%
d4-1,2-Dichlorobenzene	61.7%	d4-2-Chlorophenol	59.7%

1/26/94



ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 2 of 2

ANALYTICAL
RESOURCES
INCORPORATED

Sample No: MW-2

Analytical
Chemists &
Consultants

Lab Sample ID: I072B QC Report No: I072-Golder Associates
LIMS ID: 94-13425 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *AWG* Date Sampled: 08/11/94
Reported: 08/29/94 Date Received: 08/12/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94
Date analyzed: 08/26/94
Instrument: NT1

Sample Amount: 1000 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	22
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.4
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.9
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	74.3%	d5-Phenol	25.9%
2-Fluorobiphenyl	69.9%	2-Fluorophenol	41.6%
d14-p-Terphenyl	92.0%	2,4,6-Tribromophenol	83.2%
d4-1,2-Dichlorobenzene	63.1%	d4-2-Chlorophenol	64.5%

4/4/94
9/26/94



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Sample No: MW-3

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: I072C
LIMS ID: 94-13426
Matrix: Water
Data Release Authorized: *BWB*
Reported: 08/29/94

QC Report No: I072-Golder Associates
Project: Norseland
933-1280
Date Sampled: 08/10/94
Date Received: 08/12/94

Analytical
Chemists &
Consultants333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94
Date analyzed: 08/26/94
Instrument: NT1

Sample Amount: 1000 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	2.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U

*John J.
7/20/94*

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS

Page 2 of 2



Sample No: MW-3

Lab Sample ID: I072C
LIMS ID: 94-13426
Matrix: Water
Data Release Authorized: *BNG*
Reported: 08/29/94

QC Report No: I072-Golder Associates
Project: Norseland
 933-1280
Date Sampled: 08/10/94
Date Received: 08/12/94

ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94
Date analyzed: 08/26/94
Instrument: NT1

Sample Amount: 1000 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	22
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.5
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.4
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	76.0%	d5-Phenol	27.1%
2-Fluorobiphenyl	67.8%	2-Fluorophenol	35.2%
d14-p-Terphenyl	80.8%	2,4,6-Tribromophenol	79.0%
d4-1,2-Dichlorobenzene	62.5%	d4-2-Chlorophenol	65.6%

*AFS
9/30/94*



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: MW-1

Analytical
Chemists &
Consultants

Lab Sample ID: I072A QC Report No: I072-Golder Associates
LIMS ID: 94-13424 Project: Norseland
Matrix: Water 933-1280
Date Sampled: 08/12/94
Date Received: 08/12/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized: *Plyk*
Reported: 09/06/94

Date extracted: 08/15/94
Date analyzed: 08/24/94 ECD4
GPC Cleanup: NO
Florisil: YES
Sulfur Cleanup: NO

Sample Amount: 1000 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor Epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
7421-36-3	Endrin Aldehyde	0.10 U
57-74-9	gamma Chlordane	0.050 U
5103-71-9	alpha Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
	Aroclor 1016/1242	1.0 U
12672-29-6	Aroclor 1248	1.0 U
11097-69-1	Aroclor 1254	1.0 U
11096-82-5	Aroclor 1260	1.0 U
11104-28-2	Aroclor 1221	2.0 U
11141-16-5	Aroclor 1232	1.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 45.6%
Tetrachloromethylene 53.5%

NJL
9/20/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Pesticides/PCB by GC/ECD

Sample No: MW-2

Lab Sample ID: I072B
LIMS ID: 94-13425
Matrix: Water

QC Report No: I072-Golder Associates
Project: Norseland
933-1280

Date Sampled: 08/11/94
Date Received: 08/12/94

Data Release Authorized: *Hugh*
Reported: 09/06/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/15/94
Date analyzed: 08/24/94 ECD4
GPC Cleanup: NO
Florisil: YES
Sulfur Cleanup: NO

Sample Amount: 1000 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor Epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
7421-36-3	Endrin Aldehyde	0.10 U
57-74-9	gamma Chlordane	0.050 U
5103-71-9	alpha Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
	Aroclor 1016/1242	1.0 U
12672-29-6	Aroclor 1248	1.0 U
11097-69-1	Aroclor 1254	1.0 U
11096-82-5	Aroclor 1260	1.0 U
11104-28-2	Aroclor 1221	2.0 U
11141-16-5	Aroclor 1232	1.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 50.9%
Tetrachloromethylene 54.1%

Hugh
7/20/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: MW-3

Lab Sample ID: I072C
LIMS ID: 94-13426
Matrix: Water

QC Report No: I072-Golder Associates
Project: Norseland
 933-1280
Date Sampled: 08/10/94
Date Received: 08/12/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized: *Phyllis*
Reported: 09/06/94

Date extracted: 08/15/94
Date analyzed: 08/24/94 ECD4
GPC Cleanup: NO
Florisil: YES
Sulfur Cleanup: NO

Sample Amount: 1000 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor Epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
7421-36-3	Endrin Aldehyde	0.10 U
57-74-9	gamma Chlordane	0.050 U
5103-71-9	alpha Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
	Aroclor 1016/1242	1.0 U
12672-29-6	Aroclor 1248	1.0 U
11097-69-1	Aroclor 1254	1.0 U
11096-82-5	Aroclor 1260	1.0 U
11104-28-2	Aroclor 1221	2.0 U
11141-16-5	Aroclor 1232	1.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 50.6%
Tetrachlorometaxylene 51.8%

*4/14
9/20/94*

ATTACHMENT 4

LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 9, 1994

Mr. Mike Lubrecht
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RECEIVED
SEP 13 1994

RE: Project No. 933-1280 (Norseland) / ARI Job No. I072

Golder Associates

Dear Mr. Lubrecht:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. accepted the following three soil samples and a VOA trip blank in good condition on August 12, 1994:

MW-1

MW-2

MW-3

No discrepancies were noted on the COC. Samples were analyzed for volatile organic compounds by EPA method 8260, semivolatile organic compounds by EPA method 8270, pesticides/PCB Aroclors by EPA method 8081, general chemistry parameters, and metals by EPA method 6010/7000. No analytical complications occurred.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file I072

441
9/20/94

BDA/dn

Chain of Custody Record & Laboratory Analysis Request



**ANALYTICAL
RESOURCES
INCORPORATED**

333 Ninth Ave. North
Seattle, WA 98109-5187

(206) 621-6490

(206) 621-7523 (FAX)

Received 8/2/94 at 1:15 PM

ARI Client: <u>GOLDEN</u>	Phone #: _____	Date: <u>8/12/94</u>											
Client Contact: <u>MIKE LUBRICK</u>	Page <u>1</u> of <u>1</u>	Number of coolers: _____											
Client Project ID: <u>No RESEAL AND 933-1280</u>		Analysis Required											
Samplers:		Notes/Comments <u>SSC</u>											
	Sample ID	Date	Time	Matx	Cont	No	Lab ID	VCA	ABN	Psi/ inHg	PCB I	PCB II	Conv
1	MW - 1	8/12/94	1010	water	"	"	"	X	X	X	X	X	X
2	MW - 2	8/11/94	1715	"	"	"	"	X	X	X	X	X	A
3	MW - 3	8/10/94	1554	"	"	"	"	X	X	X	X	X	X
4													
5													
6													
7													
Comments/Special Instructions:		Relinquished by: (Signature) Printed Name: Company:	Relinquished by: (Signature) Printed Name: Company:	Relinquished by: (Signature) Printed Name: Company:									
		<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>	<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>	<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>									
		Date: <u>8/12/94</u> Time: <u>13:29</u>	Date: <u>8/12/94</u> Time: <u>13:29</u>	Date: <u>8/12/94</u> Time: <u>13:29</u>									
		Received by: (Signature) Printed Name: Company:	Received by: (Signature) Printed Name: Company:	Received by: (Signature) Printed Name: Company:									
		<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>	<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>	<u>Shelby M. Miller</u> <u>DAVID F. SALTER</u>									
		Date: <u>8/12/94</u> Time: <u>13:29</u>	Date: <u>8/12/94</u> Time: <u>13:29</u>	Date: <u>8/12/94</u> Time: <u>13:29</u>									

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.

8/12/94
8/12/94

ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

ORGANIC DATA VALIDATION SUMMARY

PROJECT NO.: 933-1280	SITE: Norseland
LABORATORY: ABI	SDG: 2072
SAMPLES/MATRIX/ANALYSES: MW-1,2,3/water / via, SVOA, pest	

DATA ASSESSMENT SUMMARY

Review Item	VOA	BNA	PEST PCB	PHOS. PEST	CHLOR. HERB	DIOXIN FURAN	GC	GC
1. Data Completeness	O	O	O					
2. Holding Times	O	C	C					
3. GC/MS Tuning	—	—	—					
4. Instrument Performance	—	—	—					
5. Calibrations	—	—	—					
6. Blanks	O	O	O					
7. Surrogates	O	O	O					
8. MS/MSD	—	O	O					
9. Internal Standards	—	--	—					
10. Compound Identification	—	—	—					
11. Tent. Ident. Cmpds (TIC)	—	—	—					
12. Result Verification	—	—	—					
13. Detection Limits	C	C	C					
14. System Performance	--	—	—					
15. Overall Assessment	C	C	C					

O = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: - Not evaluated, data not provided

Validated by: A. Schubert Date: 9/20/99

Reviewed by: _____ Date: _____

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

1. Data Completeness (check if present)

- Case narrative
- Chain of Custody
- Sample Analysis Request
- Sample Results
- Detection Limits
- GC/MS Tuning
- Initial Calibration Data
- Continuing Calibration Data

- Blank Results
- Surrogate Results
- MS/MSD Results
- Internal Standards Performance
- Raw Data
- Sample Preparation Data
- Standards Preparation Data

Comments/Action Taken: _____

2. Holding Times (check all that apply)

- Unpreserved VOA samples analyzed in 7 days from collection
- Preserved VOA samples analyzed in 14 days from collection
- BNA samples extracted in 7 days (14 days soils) from collection
- BNA extracts analyzed in 40 days from extraction
- Pest/PCB samples extracted in 7 days (14 days soils) from collection
- Pest/PCB extracts analyzed in 40 days from extraction

Qualify as estimated (J/UJ) all results analyzed past the holding time limits listed above but within 2x the limit. Qualify detect as estimated (J) and non-detects unusable (UR) for results analyzed greater than 2x the above limits.

Comments/Qualified Results: _____

3. GC/MS Tuning

- GC/MS tuning performed
- GC/MS tuning within control limits
- GC/MS tuning outside control limits (qualify R/UR)

Comments/Qualified Results: Data not provided

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

4. Instrument Performance

- DDT Retention Time Acceptable (packed columns) / Resolution Acceptable (All Columns) (if no, R detects)
- Standard Checks within Retention Time Window (if no, check against expanded windows and if outside, qualify R/UR)
- DDT and/or Endrin Breakdowns > 20% (J/UR DDT and Endrin, NJ all breakdown product hits)
- DBC, TCMX or DCBP retention time checks within SOW limits (if no, R/UR)

Comments/Qualified Results: Not provided

5. Initial and Continuing Calibration

GC/MS Data

- Initial calibration performed
 - Initial calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
 - Initial calibration RSDs $\leq 30\%$ for all compounds (if no, J/UJ)
 - Continuing calibration performed
 - Continuing calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
 - Continuing calibration %D $\leq 25\%$ for all compounds (if no, J/UJ)
- Pesticide/PCB data
- RSD $\leq 10\%$ for performance checks (if no, J detects)
 - All standards analyzed prior to sample analysis, confirmation standards analyzed at proper frequency
 - Continuing calibration %D $\leq 15\%$ for quantitation ($\leq 20\%$ for confirmation) (if no, J all detects)

Comments/Qualified Results: Not provided

6. Blanks

Method blanks analyzed

Common Laboratory Contaminants Detected

- Methylene chloride
 - Acetone detected
 - Phthalates detected (list or attach summary sheet)
 - TICs detected (list or attach summary sheet)
 - Qualify sample results $< 10\times$ above as U at SQL
- Non-common Laboratory Contaminants
- Other TCL compounds detected (list or attach summary sheet)
 - Qualify sample results $< 5\times$ above as U at SQL

Toluene
2-Butanone

Comments/Qualified Results: _____

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

7. Surrogates

Note: Surrogate limits apply if at least one volatile or pesticide/PCB surrogate is out of specification and at least two semivolatile surrogates are out of specification.

- Surrogates analyzed
 - Surrogate recoveries within method control limits
 - Surrogate recoveries above method control limits (J detects only)
 - Surrogate recoveries below method control limits but $\geq 10\%$ (J/JR)
 - Surrogate recoveries below 10% (JR/J)

8. Matrix Spike/Matrix Spike Duplicate

- MS/MSD analyzed
 - MS/MSD recoveries within method control limits *first, next, surv.*
 - MS/MSD recoveries above method control limits (J detects only)
 - MS/MSD recoveries below method control limits but $\geq 10\%$ (J/JU)
 - MS/MSD recoveries below 10%, and surrogates are out (J/JR)

Comments/Qualified Results: No data provided for volatile

9. Internal Standards Performance

- Internal standards added to all samples and QC
 - Internal standard areas within control limits
 - Internal standard areas outside control limits but greater than 10% (J/UJ)
 - Internal standard areas are zero or less than 10% (J/UJ)
 - Internal standard RTs within ± 30 second windows (if no, J/UJ)

Comments/Qualified Results: Not provided

10. Compound Identification

- Library search data provided for positive results (if no and data is required, request from the laboratory)
 Positive results within RT criteria for dual column confirmation (Pesticide/PCB data only) (if no, qualify detects as U)
 Compound ID within ± 0.08 RRT of standard (if no, qualify as J if spectral match okay)
 Mass spectral match acceptable (if no, qualify as R)

Comments/Qualified Results: Not provided

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

11. Tentatively Identified Compounds (TIC)

- TIC's searched (10/20 largest non-Aldol VOA's/Semi-VOA's)
- TIC's identified properly
- TIC's present in blank and samples (qualify according to 5x rule)
- Common laboratory contaminants reported as TIC's (qualify the following as rejected [CO₂ (m/z 44), siloxanes (m/z 73), diethyl ether, hexane, freons, phthalates <100 ug/L or <4000 ug/Kg, cyclohexene derivatives, aldehydes or hydroxy ketones and hydroxy aldehydes])
- Qualify valid TICs as JN

Comments/Qualified Results: Not provided

12. Result Verification

- All results supported in raw data
- Transcription errors identified (note constituent(s) and changes below)
- Calculation errors identified (note constituent(s) and changes below)

Comments/Qualified Results: Not provided

13. Detection Limits

- Sample quantitation limits (SQLs) meet the project requirements (note discrepancies below)

Comments/Qualified Results: Detection limits for metoxychlor, toxaphene, and aroclors 1016/1242, 1248, 1254, 1221, 1232 exceeded CRDLs.

14. System Performance

- Baseline anomalies noted which affect quantitation (J/UJ)
- High background MS levels noted which affect quantitation (J/UJ)
- Extraneous or coeluting peaks affecting quantitation (J/UJ)
- Poor resolution (J/UJ)
- Peak tailing/peak splitting affecting quantitation (J/UJ)

Comments/Qualified Results: Not provided

ORGANIC DATA VALIDATION SUMMARY

15. Overall Assessment

Comments/Qualified Results: _____

MEMORANDUM

TO: Norseland Project QA Record

October 3, 1994

FR: Sandra Schildt, Golder Associates Inc. *SJS*

RE: METALS AND GENERAL CHEMISTRY ANALYSIS DATA VALIDATION SUMMARY FOR
DATA PACKAGE: I072 (933-1280, Filename NOR072.INO)

INTRODUCTION

This memorandum presents the results of data validation on data package I072 prepared by Analytical Resources, Inc. (ARI). A list of the samples validated along with the analytes reported and the method of analysis is provided in the following table.

SAMPLE ID	SAMPLE DATE	MEDIA	ANALYSIS
MW-1	8/12/94	WATER	SEE NOTE 1
MW-2	8/11/94	WATER	
MW-3	8/10/94	WATER	

Note 1: All samples were analyzed for CLP target analyte list (TAL) metals using method 6010/000 and general chemistry parameters.

Data validation was conducted in accordance with the RI/FS work plan (Golder 1993) and EPA validation procedures (Bleyler 1988). Attachments 1 through 5 to this memo provide the following information:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced validation criteria.

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met.

Detection Limits. Detection limit goals were met for all analyses.

Completeness. The data package was complete for all reported analyses.

MAJOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of the data as unusable.

MINOR DEFICIENCIES

The following is a summary of the minor deficiencies identified during validation which required qualification of data.

Laboratory Blanks

- Lead was detected in the method blank. Sample results at a concentration greater than the IDL, but less than five times the highest blank value are qualified as undetected (U). Attachments 2 and 5 provide a summary of samples, data qualifications applied and supporting documentation.

REFERENCES

Bleyer 1988, Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, February 1, 1988. U.S. Environmental Protection Agency, Washington D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, July 27, 1993. Golder Associates, Redmond, Washington.

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF INORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected. The concentration reported is less than the contract required detection limit (CRDL) but greater than the instrument detection limit (IDL). The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample detection limit corrected for sample aliquot size, dilution factors and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and was not detected. Due to a minor quality control deficiency identified during data validation, the concentration reported may not accurately reflect the sample detection limit. The associated data have been qualified as estimated but should be considered usable for decision making purposes.
- BJ - Indicates the constituent was analyzed for and detected at a concentration less than the CRDL but greater than the IDL. Due to a minor quality control deficiency identified during data validation, The associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. Due to a minor quality control deficiency identified during data validation the associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- UR - Indicates the constituent was analyzed for and not detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.

ATTACHMENT 2

SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY - FORM B-7

ATTACHMENT 3

ANNOTATED LABORATORY REPORTS



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: I072
ARI Sample number: A
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
* Solids: 0.00

ID number: MW-1
Project: 933-1280
Description: Total Metals
Sampled: / /
Received: 08/12/94
Released by: *[Signature]*

Analytical
Chemists &
Consultants
333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	14.2 mg/L		0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L		0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.073 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	37.9 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.041 mg/L		0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.006 mg/L		0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.014 mg/L		0.002	RCC	ICP	08/31/94
7439-89-6	Iron	15.5 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.001 mg/L	--	0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	16.6 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.339 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.04 mg/L		0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	1.7 mg/L		0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	09/02/94
7440-21-3	Silicon	32.2 mg/L		0.02	RCC	ICP	08/31/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	9.46 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.039 mg/L		0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.035 mg/L		0.004	RCC	ICP	08/31/94

[Signature]
8/12/94



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: I072
ARI Sample number: B
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
% Solids: 0.00

ID number: MW-2
Project: 933-1280
Description: Total Metals
Sampled: / /
Received: 08/12/94

Released by: JK

Analytical
Chemists &
Consultants
333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	34.3 mg/L		0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L		0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.158 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	20.0 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.056 mg/L		0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.020 mg/L		0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.034 mg/L		0.002	RCC	ICP	08/31/94
7439-89-6	Iron	39.6 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.005 mg/L	—	0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	10.7 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.898 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.11 mg/L		0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	1.9 mg/L		0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	09/02/94
7440-21-3	Silicon	58.4 mg/L		0.02	RCC	ICP	08/31/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	6.02 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.048 mg/L		0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.065 mg/L		0.004	RCC	ICP	08/31/94

JK
9/20/94



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ARI job number: I072
ARI Sample number: C
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
* Solids: 0.00

ID number: MW-3
Project: 933-1280
Description: Total Metals
Sampled: / /
Received: 08/12/94
Released by: *[Signature]*

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Seattle, WA 98109-5187
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(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	21.2 mg/L		0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.095 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	13.3 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.059 mg/L		0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.009 mg/L		0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.019 mg/L		0.002	RCC	ICP	08/31/94
7439-89-6	Iron	21.8 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.003 mg/L	—	0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	7.23 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.336 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.08 mg/L		0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	1.6 mg/L		0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	09/02/94
7440-21-3	Silicon	43.8 mg/L		0.02	RCC	ICP	08/31/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	4.37 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.035 mg/L		0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.040 mg/L		0.004	RCC	ICP	08/31/94

*H.A./
9/25/94*



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ARI job number: I072
ARI Sample number: D
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
% Solids: 0.00

ID number: MW-1
Project: 933-1280
Description: Dissolved Metals
Sampled: / /
Received: 08/12/94

Released by: *BK*

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	0.03 mg/L		0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.030 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	33.2 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7439-89-6	Iron	0.017 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.001 mg/L	U	0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	12.9 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.078 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	0.7 mg/L		0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.002 mg/L		0.001	RCN	GFA	08/31/94
7440-21-3	Silicon	15.1 mg/L		0.02	DMN	ICP	08/29/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	13.0 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.003 mg/L		0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.009 mg/L		0.004	RCC	ICP	08/31/94

JK
9/23/94



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ARI job number: I072
ARI Sample number: E
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
% Solids: 0.00

ID number: MW-2
Project: 933-1280
Description: Dissolved Metals
Sampled: / /
Received: 08/12/94
Released by: *[Signature]*

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	0.02 mg/L	U	0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.006 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	12.5 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7439-89-6	Iron	0.067 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.002 mg/L		0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	4.09 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.023 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	0.5 mg/L		0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.001 mg/L		0.001	RCN	GFA	08/31/94
7440-21-3	Silicon	14.4 mg/L		0.02	DMN	ICP	08/29/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	7.99 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L		0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.002 mg/L		0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.007 mg/L		0.004	RCC	ICP	08/31/94

8/12/94



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ARI job number: I072
ARI Sample number: F
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
% Solids: 0.00

ID number: MW-3
Project: 933-1280
Description: Dissolved Metals
Sampled: / /
Received: 08/12/94
Released by: *[Signature]*

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	0.02 mg/L	U	0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.049 mg/L		0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	9.41 mg/L		0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7439-89-6	Iron	0.025 mg/L		0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.001 mg/L	U	0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	2.86 mg/L		0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.024 mg/L		0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	0.4 mg/L	U	0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	08/31/94
7440-21-3	Silicon	14.1 mg/L		0.02	DMN	ICP	08/29/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	4.89 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.035 mg/L		0.004	RCC	ICP	08/31/94

[Signature]
8/30/94



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Final Report
Laboratory Analysis of Conventional Parameters

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Sample No: MW-1

Lab Sample ID: I072A QC Report No: I072-Golder Associates
LIMS ID: 94-13424 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MCP* Date Sampled: 08/12/94
Reported: 09/06/94 *g6* Date Received: 08/12/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	08/12/94	EPA 150.1	0.00	std units	6.62
Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	79.3
Phenolphthalein Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	79.3
Hardness (by Calculation)	08/31/94	SM 2340 B		mg/L CaCO ₃	163
Conductivity	08/19/94	EPA 120.1	1.00	umhos/cm	324
Total Dissolved Solids	08/16/94	EPA 160.1	10.0	mg/L	235
Turbidity	08/12/94	EPA 180.1	0.05	NTU	250
Fluoride	08/19/94	EPA 340.2	0.10	mg/L	< 0.1 U
Chloride	08/19/94	EPA 325.2	1.0	mg/L	17.4
Total Cyanide	08/19/94	EPA 335.2	0.004	mg/L	< 0.004 U
N-Nitrate	08/24/94	Calculated	0.010	mg-N/L	17.0
N-Nitrite	08/24/94	EPA 354.1	0.010	mg-N/L	0.032
Nitrate + Nitrite (NO ₂ +NO ₃)	08/24/94	EPA 353.2	0.010	mg-N/L	17.0
Sulfate	08/17/94	EPA 375.2	2.5	mg/L	4.3

RL Analytical reporting limit

U Undetected at reported detection limit

Hardness calculated from calcium and magnesium values

Report for I072 received 08/12/94

✓ 10/20/94



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Laboratory Analysis of Conventional Parameters

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Lab Sample ID: I072B QC Report No: I072-Golder Associates
LIMS ID: 94-13425 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MWD* Date Sampled: 08/11/94
Reported: 09/06/94 *9-6* Date Received: 08/12/94

Analyte	Analysis Date	Method	RL	Units	Result	
pH	08/12/94	EPA 150.1	0.00	std units	6.80	
Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	51.6	
Phenolphthalein Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0	U
Carbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0	U
Bicarbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	51.6	
Hardness (by Calculation)	08/31/94	SM 2340 B		mg/L CaCO ₃	94.0	
Conductivity	08/19/94	EPA 120.1	1.00	umhos/cm	120	
Total Dissolved Solids	08/16/94	EPA 160.1	10.0	mg/L	103	
Turbidity	08/12/94	EPA 180.1	0.05	NTU	390	
Fluoride	08/19/94	EPA 340.2	0.10	mg/L	< 0.1	U
Chloride	08/19/94	EPA 325.2	1.0	mg/L	3.7	
Total Cyanide	08/19/94	EPA 335.2	0.004	mg/L	< 0.002	U
N-Nitrate	08/24/94	Calculated	0.010	mg-N/L	2.59	
N-Nitrite	08/24/94	EPA 354.1	0.010	mg-N/L	< 0.01	U
Nitrate + Nitrite (NO ₂ +NO ₃)	08/24/94	EPA 353.2	0.010	mg-N/L	2.59	
Sulfate	08/17/94	EPA 375.2	2.5	mg/L	3.0	

RL Analytical reporting limit

U Undetected at reported detection limit

Hardness calculated from calcium and magnesium values

Report for I072 received 08/12/94

AJ
9/26/94



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Lab Sample ID: I072C QC Report No: I072-Golder Associates
LIMS ID: 94-13426 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MMP* Date Sampled: 08/10/94
Reported: 09/06/94 Date Received: 08/12/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	08/12/94	EPA 150.1	0.00	std units	6.67
Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	43.2
Phenolphthalein Alkalinity	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	08/15/94	SM 2320	1.0	mg/L CaCO ₃	43.2
Hardness (by Calculation)	08/31/94	SM 2340 B		mg/L CaCO ₃	63.0
Conductivity	08/19/94	EPA 120.1	1.00	umhos/cm	86.3
Total Dissolved Solids	08/26/94	EPA 160.1	10.0	mg/L	80.0
Turbidity	08/12/94	EPA 180.1	0.05	NTU	210
Fluoride	08/19/94	EPA 340.2	0.10	mg/L	< 0.1 U
Chloride	08/19/94	EPA 325.2	1.0	mg/L	3.4
Total Cyanide	08/19/94	EPA 335.2	0.004	mg/L	< 0.002 U
N-Nitrate	08/24/94	Calculated	0.010	mg-N/L	0.178
N-Nitrite	08/24/94	EPA 354.1	0.010	mg-N/L	0.029
Nitrate + Nitrite (NO ₂ +NO ₃)	08/24/94	EPA 353.2	0.010	mg-N/L	0.207
Sulfate	08/17/94	EPA 375.2	2.5	mg/L	3.2

RL Analytical reporting limit

U Undetected at reported detection limit

Hardness calculated from calcium and magnesium values

Report for I072 received 08/12/94

100
100



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Hardness by the Calculation Method

Client: Golder
Project: 933-1280

Units: mg CaCO₃/L

Released by: *[Signature]*

ARI Job Number	Sample ID	CA, mg/L	MG, mg/L	Hardness
I072	A	37.9	16.6	163.0
I072	B	20.0	10.7	94.0
I072	C	13.3	7.23	63.0

[Handwritten signature]

ATTACHMENT 4

LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 9, 1994

Mr. Mike Lubrecht
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RECEIVED
SEP 13 1994

RE: Project No. 933-1280 (Norseland) / ARI Job No. I072

Golder Associates

Dear Mr. Lubrecht:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. accepted the following three soil samples and a VOA trip blank in good condition on August 12, 1994:

MW-1

MW-2

MW-3

No discrepancies were noted on the COC. Samples were analyzed for volatile organic compounds by EPA method 8260, semivolatile organic compounds by EPA method 8270, pesticides/PCB Aroclors by EPA method 8081, general chemistry parameters, and metals by EPA method 6010/7000. No analytical complications occurred.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file I072

BDA/dn

MM/9/94

Chain of Custody Record & Laboratory Analysis Request



**ANALYTICAL
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Seattle, WA 98109-5187

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(206) 621-7523 (FAX)

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Date: 8/12/94

Page 1 of 1

ARI Client: GOLDEK Phone #:

Client Contact: MIKE LUBERT

Client Project ID: Neuse Land 933-1280

Samplers:

	Sample ID	Date	Time	Matx Cont	No Lab ID	VCA	ABN	Post/RecB	Batch I	Batch II	Comments	Notes/Comments
1	MW - 1	8/12/94	1010	water		X	X	X	X	X		
2	MW - 2	8/11/94	1715	"		X	X	X	X	X		
3	MW - 3	8/10/94	1554	-		X	X	X	X	X		
4												
5												
6												
7												
Comments/Special Instructions:												
Relinquished by: (Signature) <u>David F. Saiter</u> Printed Name: <u>DAVID F. SAITER</u> Company: <u>Gold EK</u> Date: <u>8/12/94</u> Time: <u>1329</u>												
Relinquished by: (Signature) <u>Sherilynn Miller</u> Printed Name: <u>SHERILYN MILLER</u> Company: <u>ARI</u> Date: <u>8/12/94</u> Time: <u>1329</u>												
Received by: (Signature) <u>Sherilynn Miller</u> Printed Name: <u>SHERILYN MILLER</u> Company: <u>ARI</u> Date: <u>8/12/94</u> Time: <u>1329</u>												

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.

8/12/94

ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

INORGANIC DATA ASSESSMENT SUMMARY

PROJECT: 933-1280	SITE: Narseland
LABORATORY: ARI	SDG: 9072
SAMPLES/MATRIX/ANALYSES: MW-1, 2, 3 / water / Metals, General chemistry	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP	AA	HG	CYANIDE	OTHER
1. Data completeness	O				O
2. Holding Times	O				
3. Calibration	- AA 9/20/94				
4. Blanks	O				O
5. ICS	--				
6. LCS	--				O
7. Duplicate RPD	O				O
8. Spike Recovery	O				O
9. MSA	--				
10. Other QC	--				
11. Field Duplicates	--				
12. Result Verification	--				
13. Overall Assessment	O				

O = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: - not evaluated, data not provided

Validated by: A. Schmidt Date: 9/20/94

Reviewed by: _____ Date: _____

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

1. Data package completeness (check if present)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Case narrative | <input type="checkbox"/> Instrument Det. Limits |
| <input checked="" type="checkbox"/> Chain of custody | <input type="checkbox"/> ICP Correction Factors |
| <input checked="" type="checkbox"/> Sample Results | <input type="checkbox"/> ICP Linear Ranges |
| <input type="checkbox"/> ICV/CCV Results | <input type="checkbox"/> Preparation Logs |
| <input checked="" type="checkbox"/> Blank Results | <input type="checkbox"/> Analysis Run Logs |
| <input type="checkbox"/> ICP Interference Check Results | <input type="checkbox"/> ICP Raw Data |
| <input checked="" type="checkbox"/> Spike Recovery Results | <input type="checkbox"/> GFAA Raw Data |
| <input checked="" type="checkbox"/> Duplicate Results | <input type="checkbox"/> Hg Raw Data |
| <input type="checkbox"/> LCS Results | <input type="checkbox"/> Cyanide Raw Data |
| <input type="checkbox"/> Standard Addition Results | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> ICP Serial Dilution | |

Comments/Qualified Results: _____

2. Holding times (check all that apply)

- ICP/GFAA metals completed in <8 mos from collection
 Mercury analyzed in <28 days from collection
 Cyanide completed in 14 days from collection

Comments/Qualified Results: _____

3. Calibrations (check all that apply)

- ICV/CCV %R for ICP/AA, 90%-110%, results acceptable
 ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
 ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
 ICV/CCV %R 80-120 for Hg, results acceptable
 ICV/CCV %R for Hg, 85%-79% or 121%-135%, results estimated (J/UJ)
 ICV/CCV %R for Hg, <65% or >135%, reject positive results (R)
 ICV/CCV %R 85-115 for Cyanide, results acceptable
 ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
 ICV/CCV %R <70% or >130%, reject positive results (R)

Comments/Qualified Results: Calibration data not provided

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

4. Blanks (check all that apply)

- Detects reported in ICB/CCB, list:
 Detects in preparation blanks, list: Pb .001, Si .19, Na .03
 Detects in field blanks, list:

Qualify as undetected (U) all sample concentrations $\leq 5X$ any associated blank concentrations.

Comments/Qualified Results: _____

5. Interference Checks (check all that apply)

- ICS A/B Recoveries Acceptable
 Al, Ca, Fe, Mg sample concentrations $>$ ICS concentrations
 ICS %R $> 120\%$, results $>$ IDL estimated (J)
 ICS %R 50-79%, results $>$ IDL estimated (J)
 ICS %R 50-79%, results $<$ IDL estimated (U/J)
 ICS %R $< 50\%$, results $>$ IDL and $<$ IDL rejected (R/U/R)

Comments/Qualified Results: Data not provided

6. Laboratory Control Samples (check all that apply)

- LCS %R 80-120
 LCS %R 50-79% or $> 120\%$, results $>$ IDL estimated (J)
 LCS %R 50-79% and results $<$ IDL estimated (U/J)
 LCS %R $< 50\%$ and all results rejected (R/U/R)

Comments/Qualified Results: Data not provided for metals,
results satisfactory for general chemistry

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable	
Yes	No

7. Duplicate (check all that apply)

- Duplicate RPD ≤ 20% for waters ($\leq 35\%$ for soils) for results > 5X CRDL
- Duplicate range is within \pm CRDL ($\pm 2 \times$ CRDL for soils) for results < 5X CRDL

Comments/Qualified Results: RPD for Fe 24.6% but results within CRDL and < 5x CRDL. No qualification

8. Spike Recovery (check all that apply)

- Spike %R with 75-125%
- Spike %R 30-74%, > 125%, results > IDL estimated (J)
- Spike %R 30-74% results < IDL estimated (UJ)
- Spike %R < 30%, results < IDL rejected (UR)
- Field blank used for spike analysis

Comments/Qualified Results: _____

9. GFAA Performance

- Duplicate injection RSD < 20%
- Duplicate injection RSD > 20%, results > CRDL estimated (J)
- Analytical spike %R 85-115%
- Analytical spike %R 40-85%, results > IDL estimated (J)
- Analytical spike %R 10-40%, results < IDL estimated (UJ)
- Analytical spike %R < 10%, results < IDL rejected (R)

Comments/Qualified Results: Data not provided

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

10. Other QC

Comments/Qualified Results: NA

11. Field Duplicates

Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: N/A

12. Result Verification

All results supported in raw data

Comments/Qualified Results: Data not provided

13. Overall Assessment

Comments/Qualified Results: _____



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ARI job number: I072
ARI Sample number: MB
Client: Golder
Contact: Mike Lubrecht
Matrix: Water
% Solids: 0.00

ID number:
Project: 933-1280
Description: Method Blank
Sampled: / /
Received: / /
Released by: *[Signature]*

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	0.02 mg/L	U	0.02	RCC	ICP	08/31/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	08/31/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	09/02/94
7440-39-3	Barium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-70-2	Calcium	0.01 mg/L	U	0.01	RCC	ICP	08/31/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	08/31/94
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-50-8	Copper	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7439-89-6	Iron	0.005 mg/L	U	0.005	RCC	ICP	08/31/94
7439-92-1	Lead	0.001 mg/L		0.001	RCN	GFA	08/30/94
7439-95-4	Magnesium	0.02 mg/L	U	0.02	RCC	ICP	08/31/94
7439-96-5	Manganese	0.001 mg/L	U	0.001	RCC	ICP	08/31/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	08/25/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	08/31/94
7440-09-7	Potassium	0.4 mg/L	U	0.4	RCC	ICP	08/31/94
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	08/31/94
7440-21-3	Silicon	0.02 mg/L	U	0.02	DMN	ICP	08/29/94
7440-21-3	Silicon	0.19 mg/L		0.02	RCC	ICP	08/31/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	08/31/94
7440-23-5	Sodium	0.03 mg/L		0.01	RCC	ICP	08/31/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	09/01/94
7440-62-2	Vanadium	0.002 mg/L	U	0.002	RCC	ICP	08/31/94
7440-66-6	Zinc	0.004 mg/L	U	0.004	RCC	ICP	08/31/94

[Handwritten signature]
7/20/94

DECEMBER 1994 SAMPLING EVENT

638

MEMORANDUM

TO: Norseland Project QA Record

February 8, 1995

FR: Susan Manchester, Golder Associates Inc.

RE: DATA EVALUATION SUMMARY FOR DATA PACKAGE J237, GROUNDWATER ANALYSIS, (933-1280.1905, Filename J237.NSL)

INTRODUCTION

This memo presents the results of data evaluation on data package J237 prepared by the Analytical Resources Inc. (ARI) laboratory. A list of samples evaluated along with the analyses reported and the method of analysis is provided in the following table.

SAMPLE ID	MEDIA	ANALYSIS	COMMENTS
MW-1	WATER	See Note 1	
MW-2	WATER		
MW-3	WATER		
MW-4	WATER		
Trip Blank	WATER		Field Duplicate (MW-2) Trip Blank

Note 1. Samples MW-1 through MW-4 were analyzed for volatiles, semivolatiles, pesticide/PCBs, metals and general chemistry parameters in accordance with the SW-846 procedures. The trip blank was analyzed for volatile organics only.

Data evaluation was conducted using Bleyler 1988 (Bleyler 1988a,b) as specified in the Norseland Work Plan (Golder 1993). Attachments 1 through 5 provide the following information as indicated below:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Evaluation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced evaluation criteria.

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met.

Detection Limits. Detection limit goals were met for all sample results as specified in the reference analytical method.

Completeness. The data package was complete for all requested analyses. A total of five samples were evaluated in this data package of which all determinations were deemed valid. This results in a completeness of 100 percent, which meets the work plan objective of 90%.

MAJOR DEFICIENCIES

No major deficiencies were identified during data evaluation which required qualification of data as unusable.

MINOR DEFICIENCIES

The following minor deficiencies were identified during data evaluation which required qualification of data as estimated.

Volatile Organics

- **Laboratory Blank.** Naphthalene was detected in the laboratory method blank. Attachments 2 and 5 provide a summary of the samples affected, qualifications applied and supporting documentation.

FIELD QC

A trip blank for volatile organic compounds (VOCs) was supplied by the laboratory a shipped to and from the field with sample containers. A complete set of duplicate samples were submitted to the laboratory. The duplicate sample was taken from MW-2 and identified on the chain-of-custody as MW-4.

- **Trip Blank.** All results are reported as undetected in the trip blank.
- **Field Duplicate.** All results we reported within QC limits with the exception of the following analytes where the relative percent difference between duplicates was greater than 25%, however no qualification was applied.

Parameter	Result (mg/l) MW-2	Result (mg/l) MW-4	Relative Percent Difference (RPD)
Turbity	240	28	158
Chloride	7.6	1.9	120
Aluminum Total Dissolved	29.9 34.1	17. 18.8	52 58
Barium Dissolved	0.155	0.091	52
Chromium Total Dissolved	0.049 0.054	0.027 0.026	58 70
Iron Total Dissolved	35.0 39.4	19.7 21.2	56 60

Magnesium Dissolved	11.3	7.57	39
Manganese Total Dissolved	0.639 0.701	0.465 0.394	31 58
Nickel Total Dissolved	0.080 0.090	0.050 0.050	46 57
Potassium Total Dissolved	1.6 1.8	0.8 1.1	67 48
Silicon Total Dissolved	56.1 58.5	34.8 42.8	47 31
Vanadium Total Dissolved	0.050 0.060	0.037 0.031	30 63
Zinc Dissolved	0.065	0.034	63

REFERENCES

Bleyler, R., 1988a, Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, United States EPA, Hazardous Site Evaluation Division, Washington, D.C.

Bleyler, R., 1988b, Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, United States EPA, Hazardous Site Evaluation Division, Washington, D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, October 1993.

ATTACHMENT 1
GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected in the associated laboratory blank. This qualifier is applied by the laboratory. During the process of data validation this qualifier may be replaced by other appropriate qualifiers as defined by the validation procedures. The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- NJ - Indicates presumptive evidence of a constituent at an estimated value. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- N - Indicates presumptive evidence of a constituent. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- JN - Indicates a tentatively identified compound (TIC) whose concentration and identification have been determined to be valid as a result of data validation. The associated data should be considered usable for decision making purposes.
- UJN - Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.
- UR - Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

GLOSSARY OF INORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected. The concentration reported is less than the contract required detection limit (CRDL) but greater than the instrument detection limit (IDL). The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample detection limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration may not accurately reflect the sample detection limit. The associated data have been qualified as estimated but should be considered usable for decision making purposes.
- BJ - Indicates the constituent was analyzed for and detected at a concentration less than the contract required detection limit (CRDL) but greater than the instrument detection limit (IDL). Due to a minor quality control deficiency identified during data validation the associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. Due to a minor quality control deficiency identified during data validation the associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- UR - Indicates the constituent was analyzed for and not detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY

ATTACHMENT 3
ANNOTATED LABORATORY REPORTS

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 2



Sample No: MW-1

Lab Sample ID: J237C
LIMS ID: 94-21336

QC Report No: J237-Golder Associates
Project: Norseland

Matrix: Water

933-1280

Data Release Authorized, *BB*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

Instrument: FINN5
Date Analyzed: 12/17/94

Sample Amount: 5.00 mL

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CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloroproppane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: MW-1

Lab Sample ID: J237C
LIMS ID: 94-21336
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 12/27/94

QC Report No: J237-Golder Associates
Project: Norseland
933-1280
Date Sampled: 12/13/94
Date Received: 12/14/94

Instrument: FINNIS
Date Analyzed: 12/17/94

Sample Amount: 5.00 mL

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CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.9%
d8-Toluene	99.5%
Bromofluorobenzene	93.1%
d4-1,2-Dichlorobenzene	99.7%

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 2



Sample No: MW-2

Lab Sample ID: J237A QC Report No: J237-Golder Associates
LIMS ID: 94-21334 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *BGS* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Instrument: FINNS Sample Amount: 5.00 mL
Date Analyzed: 12/17/94

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloroproppane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: MW-2

Lab Sample ID: J237A QC Report No: J237-Golder Associates
LIMS ID: 94-21334 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *RWS* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Instrument: FINNS Sample Amount: 5.00 mL
Date Analyzed: 12/17/94

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	102%
d8-Toluene	103%
Bromofluorobenzene	98.6%
d4-1,2-Dichlorobenzene	107%

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
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Sample No: MW-3

Lab Sample ID: J237D

QC Report No: J237-Golder Associates

LIMS ID: 94-21337

Project: Norseland

Matrix: Water

933-1280

Data Release Authorized: *MM*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

Instrument: FINN5
Date Analyzed: 12/17/94

Sample Amount: 5.00 mL

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(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
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Sample No: MW-3

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333 Ninth Ave. North
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(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: J237D QC Report No: J237-Golder Associates
LIMS ID: 94-21337 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *BWS* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Instrument: FINN5 Sample Amount: 5.00 mL
Date Analyzed: 12/17/94

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromoform	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	94.6%
d8-Toluene	99.5%
Bromofluorobenzene	94.7%
d4-1,2-Dichlorobenzene	99.4%

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS

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Sample No: MW-4

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(206) 621-7523 (FAX)

Lab Sample ID: J237B QC Report No: J237-Golder Associates
LIMS ID: 94-21335 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MW* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Instrument: FINN5 Sample Amount: 5.00 mL
Date Analyzed: 12/17/94

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
m,p-Xylene		1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
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Sample No: MW-4

Lab Sample ID: J237B QC Report No: J237-Golder Associates
LIMS ID: 94-21335 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *SN* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Instrument: FINN5 Sample Amount: 5.00 mL
Date Analyzed: 12/17/94

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CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.8 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	103%
Bromofluorobenzene	96.5%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
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Sample No: Trip Blank

Lab Sample ID: J237I
LIMS ID: 94-21342
Matrix: Water
Data Release Authorized: *BN*
Reported: 12/27/94

QC Report No: J237-Golder Associates
Project: Norseland
 933-1280
Date Sampled: 12/09/94
Date Received: 12/14/94

Instrument: FINNIS
Date Analyzed: 12/17/94

Sample Amount: 5.00 mL

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(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
	m,p-Xylene	1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 2 of 2



Sample No: Trip Blank

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(206) 621-7523 (FAX)

Lab Sample ID: J237I QC Report No: J237-Golder Associates
LIMS ID: 94-21342 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *BB* Date Sampled: 12/09/94
Reported: 12/27/94 Date Received: 12/14/94

Instrument: FINNIS
Date Analyzed: 12/17/94

Sample Amount: 5.00 mL

CAS Number	Analyte	ug/L
95-47-6	O-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	105%
Bromofluorobenzene	93.6%
d4-1,2-Dichlorobenzene	102%



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

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Sample No: MW-1

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(206) 621-7523 (FAX)

Lab Sample ID: J237C QC Report No: J237-Golder Associates
LIMS ID: 94-21336 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *6/15* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	2.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	3.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	6.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U



ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS

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Sample No: MW-2

Lab Sample ID: J237A

QC Report No: J237-Golder Associates

LIMS ID: 94-21334

Project: Norseland

Matrix: Water

933-1280

Data Release Authorized: *[Signature]*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	2.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	3.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	6.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U



ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS

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ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: J237A QC Report No: J237-Golder Associates
LIMS ID: 94-21334 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *OK* Date Sampled: 12/13/94
Reported: 12/27/94 Date Received: 12/14/94

Date extracted: 12/15/94 Sample Amount: 500 mL
Date analyzed: 12/22/94 Final Extract Volume: 0.5 mL
Instrument: FINN6 Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.4
.218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.0 U
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	54.2%	d5-Phenol	34.5%
2-Fluorobiphenyl	52.3%	2-Fluorophenol	47.6%
d14-p-Terphenyl	62.7%	2,4,6-Tribromophenol	48.4%
d4-1,2-Dichlorobenzene	53.3%	d4-2-Chlorophenol	55.1%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Sample No: MW-3

Analytical
Chemists &
Consultants

Lab Sample ID: J237D

QC Report No: J237-Golder Associates

LIMS ID: 94-21337

Project: Norseland

Matrix: Water

933-1280

Data Release Authorized: *[Signature]*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	2.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	3.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	6.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample No: MW-3

Analytical
Chemists &
Consultants

Lab Sample ID: J237D

QC Report No: J237-Golder Associates

LIMS ID: 94-21337

Project: Norseland

Matrix: Water

933-1280

Data Release Authorized: *AFB*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.5
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrone	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.6
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.0 U
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	57.8%	d5-Phenol	37.0%
2-Fluorobiphenyl	55.0%	2-Fluorophenol	50.9%
d14-p-Terphenyl	82.1%	2,4,6-Tribromophenol	64.0%
d4-1,2-Dichlorobenzene	51.4%	d4-2-Chlorophenol	56.5%

ORGANIC DATA VALIDATION SUMMARY

Acceptable	
Yes	No

1. Data Completeness (check if present)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Case narrative
<input type="checkbox"/> Chain of Custody
<input type="checkbox"/> Sample Analysis Request
<input type="checkbox"/> Sample Results
<input type="checkbox"/> Detection Limits
<input checked="" type="checkbox"/> GC/MS Tuning
<input checked="" type="checkbox"/> Initial Calibration Data
<input checked="" type="checkbox"/> Continuing Calibration Data | <input checked="" type="checkbox"/> Blank Results
<input type="checkbox"/> Surrogate Results
<input type="checkbox"/> MS/MSD Results
<input checked="" type="checkbox"/> Internal Standards Performance
<input type="checkbox"/> Raw Data
<input type="checkbox"/> Sample Preparation Data
<input checked="" type="checkbox"/> Standards Preparation Data |
|--|---|

Comments/Action Taken:

2. Holding Times (check all that apply)

- Unpreserved VOA samples analyzed in 7 days from collection
- Preserved VOA samples analyzed in 14 days from collection
- BNA samples extracted in 7 days (14 days soils) from collection
- BNA extracts analyzed in 40 days from extraction
- Pest/PCB samples extracted in 7 days (14 days soils) from collection
- Pest/PCB extracts analyzed in 40 days from extraction

Qualify as estimated (J/UJ) all results analyzed past the holding time limits listed above but within 2x the limit. Qualify detects as estimated (J) and non-detects unusable (UR) for results analyzed greater than 2x the above limits.

Comments/Qualified Results:

VOA: Samples were collected on 12/15/94 and analyzed on 12/27/94.
 SWAT: Collected on 12/15/94, Extracted on 12/15/94 and analyzed on 12/27/94
 EPLPCB: Collected on 12/15/94, Extracted on 12/15/94 and analyzed on 12/27/94.

3. GC/MS Tuning

- GC/MS tuning performed
- GC/MS tuning within control limits
- GC/MS tuning outside control limits (qualify R/UR)

Comments/Qualified Results:

ORGANIC DATA VALIDATION SUMMARY

	Acceptable
	Yes
	No

4. Instrument Performance NA —

- DDT Retention Time Acceptable (packed columns) / Resolution Acceptable (All Columns) (if no, R detects)
- Standard Checks within Retention Time Window (if no, check against expanded windows and if outside, qualify R/JR)
- DDT and/or Endrin Breakdowns > 20% (J/JR DDT and Endrin, NJ all breakdown product hits)
- DBC, TCMX or DCBP retention time checks within SOW limits (if no, R/JR)

Comments/Qualified Results: _____

5. Initial and Continuing Calibration NA —

GC/MS Data

- Initial calibration performed
- Initial calibration RRFs ≥ 0.05 for all compounds (if no, J/JR)
- Initial calibration RSDs $\leq 30\%$ for all compounds (if no, J/UJ)
- Continuing calibration performed
- Continuing calibration RRFs ≥ 0.05 for all compounds (if no, J/JR)
- Continuing calibration %D $\leq 25\%$ for all compounds (if no, J/UJ)
- Pesticide/PCB data
- RSD $\leq 10\%$ for performance checks (if no, J detects)
- All standards analyzed prior to sample analysis, confirmation standards analyzed at proper frequency
- Continuing calibration %D $\leq 15\%$ for quantitation ($\leq 20\%$ for confirmation) (if no, J all detects)

Comments/Qualified Results: _____

6. Blanks — ✓

Method blanks analyzed

Common Laboratory Contaminants Detected

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Methylene chloride | <input type="checkbox"/> Toluene |
| <input type="checkbox"/> Acetone detected | <input type="checkbox"/> 2-Butenone |
| <input type="checkbox"/> Phthalates detected (list or attach summary sheet) | |
| <input type="checkbox"/> TICs detected (list or attach summary sheet) | |
| Qualify sample results <10x above as U at SQL | |
| Non-common Laboratory Contaminants | |
| <input type="checkbox"/> Other TCL compounds detected (list or attach summary sheet) | |
| Qualify sample results <5x above as U at SQL | |

Comments/Qualified Results: Naphthalene was detected in the volatiles lab blank. Assoc. results qual. as undetected (U). All other blank results are undetected.

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

7. Surrogates

Note: Surrogate limits apply if at least one volatile or pesticide/PCB surrogate is out of specification and at least two semivolatile surrogates are out of specification.

- Surrogates analyzed
 Surrogate recoveries within method control limits
 Surrogate recoveries above method control limits (J detects only)
 Surrogate recoveries below method control limits but $\geq 10\%$ (J/UJ)
 Surrogate recoveries below 10% (J/UR)
-
-
-

8. Matrix Spike/Matrix Spike Duplicate

- MS/MSD analyzed
 MS/MSD recoveries within method control limits
 MS/MSD recoveries above method control limits (J detects only)
 MS/MSD recoveries below method control limits but $\geq 10\%$ (J/UJ)
 MS/MSD recoveries below 10%, and surrogates are out (J/UR)

Comments/Qualified Results: The blank spike 2R for gamma-BTC is low at 412%. No qualification is required since all surrogate recoveries are acceptable. A blank spike was performed for the SWAT & PIPES sections due to lack of sample volume.

9. Internal Standards Performance

- Internal standards added to all samples and QC
 Internal standard areas within control limits
 Internal standard areas outside control limits but greater than 10% (J/UJ)
 Internal standard areas are zero or less than 10% (J/UR)
 Internal standard RTs within ± 30 second windows (if no, J/UJ)

Comments/Qualified Results: _____

10. Compound Identification

- Library search data provided for positive results (if no and data is required, request from the laboratory)
 Positive results within RT criteria for dual column confirmation (Pesticide/PCB data only) (if no, qualify detects as U)
 Compound ID within ± 0.08 RRT of standard (if no, qualify as J if spectral match okay)
 Mass spectral match acceptable (if no, qualify as R)

Comments/Qualified Results: _____

ORGANIC DATA VALIDATION SUMMARY

Acceptable	Yes	No
------------	-----	----

11. Tentatively Identified Compounds (TIC)

- TIC's searched (10/20 largest non-Aldol VOA's/Semi-VOA's)
- TIC's identified properly
- TIC's present in blank and samples (qualify according to 5x rule)
- Common laboratory contaminants reported as TIC's (qualify the following as rejected (CO₂ (m/z 44), siloxanes (m/z 73), diethyl ether, hexane, freons, phthalates <100 ug/L or <4000 ug/Kg, cyclohexene derivatives, aldehydes or hydroxy ketones and hydroxy aldehydes))
- Quality valid TICs as JN

Comments/Qualified Results: _____

12. Result Verification

- All results supported in raw data
- Transcription errors identified (note constituent(s) and changes below)
- Calculation errors identified (note constituent(s) and changes below)

Comments/Qualified Results: _____

13. Detection Limits

- Sample quantitation limits (SQLs) meet the project requirements (note discrepancies below)

Comments/Qualified Results: _____

14. System Performance

- Baseline anomalies noted which affect quantitation (J/UJ)
- High background MS levels noted which affect quantitation (J/UJ)
- Extraneous or coeluting peaks affecting quantitation (J/UJ)
- Poor resolution (J/UJ)
- Peak tailing/peak splitting affecting quantitation (J/UJ)

Comments/Qualified Results: _____

INORGANIC DATA ASSESSMENT SUMMARY

PROJECT: 933-1280.1905	SITE: Norreland
LABORATORY: ARI	SDG: J237
SAMPLES/MATRIX/ANALYSES: Waters	
MW-1	
MW-2	
MW-3	
MW-4	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP	AA	HG	CYANIDE	OTHER
1. Data completeness	0	0	0	0	0
2. Holding Times	0	0	0	0	0
3. Calibration	NA				→
4. Blanks	0	0	0	0	0
5. ICS	NA				→
6. LCS	NA		✓	0	0
7. Duplicate RPD	0	0	0	0	0
8. Spike Recovery	0	0	0	0	0
9. MSA	NA				✓
10. Other QC	NA				✓
11. Field Duplicates	NA				✓
12. Result Verification	NA				✓
13. Overall Assessment	0	0	0	0	0

0 = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: Raw data was not provided
as per lab agreement

Validated by: Jeff Marsteller Date: 1/19/95

Reviewed by: _____ Date: _____



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Pesticides/PCB by GC/ECD Method 8081
Prepared by Method 3550

Sample No: MW-1

Analytical
Chemists &
Consultants

Lab Sample ID: J237C
LIMS ID: 94-21336
Matrix: Water

QC Report No: J237-Golder Associates
Project: Norseland
933-1280
Date Sampled: 12/13/94
Date Received: 12/14/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 01/05/95

Date extracted: 12/15/94
Date analyzed: 12/23/94 ECD4
GPC Cleanup: NO
Florisil: YES
Sulfur Cleanup: NO

Sample Amount: 500 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.10 U
319-85-7	beta-BHC	0.10 U
319-86-8	delta-BHC	0.10 U
58-89-9	gamma-BHC (Lindane)	0.10 U
76-44-8	Heptachlor	0.10 U
309-00-2	Aldrin	0.10 U
1024-57-3	Heptachlor Epoxide	0.10 U
959-98-8	Endosulfan I	0.10 U
60-57-1	Dieldrin	0.20 U
72-55-9	4,4'-DDE	0.20 U
72-20-8	Endrin	0.20 U
33213-65-9	Endosulfan II	0.20 U
72-54-8	4,4'-DDD	0.20 U
1031-07-8	Endosulfan Sulfate	0.20 U
50-29-3	4,4'-DDT	0.20 U
72-43-5	Methoxychlor	1.0 U
7421-93-4	Endrin Aldehyde	0.20 U
57-74-9	gamma Chlordane	0.10 U
5103-71-9	alpha Chlordane	0.10 U
8001-35-2	Toxaphene	10 U
12674-11-2	Aroclor 1016	2.0 U
53469-21-9	Aroclor 1242	2.0 U
12672-29-6	Aroclor 1248	2.0 U
11097-69-1	Aroclor 1254	2.0 U
11096-82-5	Aroclor 1260	2.0 U
11104-28-2	Aroclor 1221	4.0 U
11141-16-5	Aroclor 1232	2.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 62.4%
Tetrachlorometaylene 46.2%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Pesticides/PCB by GC/ECD Method 8081
Prepared by Method 3550

Sample No: MW-2

Analytical
Chemists &
Consultants

Lab Sample ID: J237A

QC Report No: J237-Golder Associates

LIMS ID: 94-21334

Project: Norseland

Matrix: Water

933-1280

Date Sampled: 12/13/94

Date Received: 12/14/94

Data Release Authorized:

Reported: 01/05/95

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/23/94 ECD4

Final Extract Volume: 10 mL

GPC Cleanup: NO

Dilution Factor: 1:1

Florisil: YES

Sulfur Cleanup: NO

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.10 U
319-85-7	beta-BHC	0.10 U
319-86-8	delta-BHC	0.10 U
58-89-9	gamma-BHC (Lindane)	0.10 U
76-44-8	Heptachlor	0.10 U
309-00-2	Aldrin	0.10 U
1024-57-3	Heptachlor Epoxide	0.10 U
959-98-8	Endosulfan I	0.10 U
60-57-1	Dieldrin	0.20 U
72-55-9	4,4'-DDE	0.20 U
72-20-8	Endrin	0.20 U
33213-65-9	Endosulfan II	0.20 U
72-54-8	4,4'-DDD	0.20 U
1031-07-8	Endosulfan Sulfate	0.20 U
50-29-3	4,4'-DDT	0.20 U
72-43-5	Methoxychlor	1.0 U
7421-93-4	Endrin Aldehyde	0.20 U
57-74-9	gamma Chlordane	0.10 U
5103-71-9	alpha Chlordane	0.10 U
8001-35-2	Toxaphene	10 U
12674-11-2	Aroclor 1016	2.0 U
53469-21-9	Aroclor 1242	2.0 U
12672-29-6	Aroclor 1248	2.0 U
11097-69-1	Aroclor 1254	2.0 U
11096-82-5	Aroclor 1260	2.0 U
11104-28-2	Aroclor 1221	4.0 U
11141-16-5	Aroclor 1232	2.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 45.7%
Tetrachlorometaylene 38.2%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Pesticides/PCB by GC/ECD Method 8081
Prepared by Method 3550

Sample No: MW-3

Analytical
Chemists &
Consultants

Lab Sample ID: J237D
LIMS ID: 94-21337
Matrix: Water

QC Report No: J237-Golder Associates
Project: Norseland
933-1280
Date Sampled: 12/13/94
Date Received: 12/14/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 01/05/95

Date extracted: 12/15/94
Date analyzed: 12/23/94 ECD4
GPC Cleanup: NO
Florisil: YES
Sulfur Cleanup: NO

Sample Amount: 500 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.10 U
319-85-7	beta-BHC	0.10 U
319-86-8	delta-BHC	0.10 U
58-89-9	gamma-BHC (Lindane)	0.10 U
76-44-8	Heptachlor	0.10 U
309-00-2	Aldrin	0.10 U
1024-57-3	Heptachlor Epoxide	0.10 U
959-98-8	Endosulfan I	0.10 U
60-57-1	Dieldrin	0.20 U
72-55-9	4,4'-DDE	0.20 U
72-20-8	Endrin	0.20 U
33213-65-9	Endosulfan II	0.20 U
72-54-8	4,4'-DDD	0.20 U
1031-07-8	Endosulfan Sulfate	0.20 U
50-29-3	4,4'-DDT	0.20 U
72-43-5	Methoxychlor	1.0 U
7421-93-4	Endrin Aldehyde	0.20 U
57-74-9	gamma Chlordane	0.10 U
5103-71-9	alpha Chlordane	0.10 U
8001-35-2	Toxaphene	10 U
12674-11-2	Aroclor 1016	2.0 U
53469-21-9	Aroclor 1242	2.0 U
12672-29-6	Aroclor 1248	2.0 U
11097-69-1	Aroclor 1254	2.0 U
11096-82-5	Aroclor 1260	2.0 U
11104-28-2	Aroclor 1221	4.0 U
11141-16-5	Aroclor 1232	2.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 59.9%
Tetrachloromethylene 41.4%



ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET

Pesticides/PCB by GC/ECD Method 8081
Prepared by Method 3550

Sample No: MW-4

Analytical
Chemists &
Consultants

Lab Sample ID: J237B
LIMS ID: 94-21335
Matrix: Water

QC Report No: J237-Golder Associates
Project: Norseland

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

933-1280

Date Sampled: 12/13/94

Date Received: 12/14/94

Data Release Authorized:
Reported: 01/05/95

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/23/94 ECD4

Final Extract Volume: 10 mL

GPC Cleanup: NO

Dilution Factor: 1:1

Florisil: YES

Sulfur Cleanup: NO

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.10 U
319-85-7	beta-BHC	0.10 U
319-86-8	delta-BHC	0.10 U
58-89-9	gamma-BHC (Lindane)	0.10 U
76-44-8	Heptachlor	0.10 U
309-00-2	Aldrin	0.10 U
1024-57-3	Heptachlor Epoxide	0.10 U
959-98-8	Endosulfan I	0.10 U
60-57-1	Dieldrin	0.20 U
72-55-9	4,4'-DDE	0.20 U
72-20-8	Endrin	0.20 U
33213-65-9	Endosulfan II	0.20 U
72-54-8	4,4'-DDD	0.20 U
1031-07-8	Endosulfan Sulfate	0.20 U
50-29-3	4,4'-DDT	0.20 U
72-43-5	Methoxychlor	1.0 U
7421-93-4	Endrin Aldehyde	0.20 U
57-74-9	gamma Chlordane	0.10 U
5103-71-9	alpha Chlordane	0.10 U
8001-35-2	Toxaphene	10 U
12674-11-2	Aroclor 1016	2.0 U
53469-21-9	Aroclor 1242	2.0 U
12672-29-6	Aroclor 1248	2.0 U
11097-69-1	Aroclor 1254	2.0 U
11096-82-5	Aroclor 1260	2.0 U
11104-28-2	Aroclor 1221	4.0 U
11141-16-5	Aroclor 1232	2.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 54.4%
Tetrachloromethylene 39.7%



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Sample No: MW-4

Lab Sample ID: J237B

LIMS ID: 94-21335

Matrix: Water

Data Release Authorized: *ENR*

Reported: 12/27/94

QC Report No: J237-Golder Associates

Project: Norseland

933-1280

Date Sampled: 12/13/94

Date Received: 12/14/94

ANALYTICAL
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333 Ninth Ave. North

Seattle, WA 98109-5187

(206) 621-6490

(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	2.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	3.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	6.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U



ANALYTICAL
RESOURCES
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ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample No: MW-4

Lab Sample ID: J237B

QC Report No: J237-Golder Associates

LIMS ID: 94-21335

Project: Norseland

Matrix: Water

933-1280

Data Release Authorized: *GJB*

Date Sampled: 12/13/94

Reported: 12/27/94

Date Received: 12/14/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187

(206) 621-6490

(206) 621-7523 (FAX)

Date extracted: 12/15/94

Sample Amount: 500 mL

Date analyzed: 12/22/94

Final Extract Volume: 0.5 mL

Instrument: FINN6

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0 U
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.0 U
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	52.1%	d5-Phenol	34.5%
2-Fluorobiphenyl	51.3%	2-Fluorophenol	43.4%
d14-p-Terphenyl	83.8%	2,4,6-Tribromophenol	53.3%
d4-1,2-Dichlorobenzene	47.8%	d4-2-Chlorophenol	53.1%



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: J237

ARI Sample number: C

Client: Golder

Contact: Douglas Morell

Matrix: Water

ID number: MW-1

Project: 933-1280

Description: Total Metals

Sampled: 12/13/94

Received: 12/14/94

% Solids: 0.00

Released by: JK

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	109 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.003 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.477 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.002 mg/L		0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	86.3 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.480 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.059 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.132 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	129 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.016 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	46.7 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	2.30 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.40 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	5.3 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	66.5 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.005 mg/L		0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	14.4 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.003 mg/L		0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.358 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.266 mg/L		0.004	RCC	ICP	12/30/94



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(206) 621-7523 (FAX)

ARI job number: J237
ARI Sample number: A
Client: Golder
Contact: Douglas Morell
Matrix: Water

ID number: MW-2
Project: 933-1280
Description: Total Metals
Sampled: 12/13/94
Received: 12/14/94

% Solids: 0.00

Released by: *[Signature]*

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	29.9 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.002 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.143 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	19.8 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.049 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.018 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.030 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	35.0 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.006 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	10.5 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.639 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.08 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	1.6 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	56.1 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	5.68 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.050 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.060 mg/L		0.004	RCC	ICP	12/30/94



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: J237
ARI Sample number: D
Client: Golder
Contact: Douglas Morell
Matrix: Water
% Solids: 0.00

ID number: MW-3
Project: 933-1280
Description: Total Metals
Sampled: 12/13/94
Received: 12/14/94
Released by: *[Signature]*

Analytical
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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	9.11 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.048 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	11.8 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.015 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.003 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.009 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	9.12 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.002 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	4.84 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.145 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.02 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	0.8 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.001 mg/L		0.001	RCN	GFA	12/22/94
7440-21-3	Silicon	28.4 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	4.24 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.014 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.025 mg/L		0.004	RCC	ICP	12/30/94



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: J237
ARI Sample number: B
Client: Golder
Contact: Douglas Morell
Matrix: Water

ID number: MW-4
Project: 933-1280
Description: Total Metals
Sampled: 12/13/94
Received: 12/14/94

% Solids: 0.00

Released by: JK

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	17.5 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.001 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.132 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	21.3 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.027 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.012 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.023 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	19.7 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.007 mg/L		0.001	RCN	GFA	01/03/95
7439-95-4	Magnesium	9.28 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.465 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.05 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	0.8 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	34.8 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	5.09 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.037 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.058 mg/L		0.004	RCC	ICP	12/30/94



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: J237
ARI Sample number: G
Client: Golder
Contact: Douglas Morell
Matrix: Water

ID number: MW-1
Project: 933-1280
Description: Dissolved Metals
Sampled: 12/13/94
Received: 12/14/94

% Solids: 0.00

Released by: JK

Analytical
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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	83.0 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.001 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.329 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.002 mg/L		0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	67.2 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.354 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.038 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.093 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	96.8 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.014 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	35.9 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	1.56 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.30 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	4.7 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	79.0 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.004 mg/L		0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	14.2 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L		0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.262 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.188 mg/L		0.004	RCC	ICP	12/30/94



ANALYTICAL
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INCORPORATED

ARI job number: J237
ARI Sample number: E
Client: Golder
Contact: Douglas Morell
Matrix: Water
% Solids: 0.00

ID number: MW-2
Project: 933-1280
Description: Dissolved Metals
Sampled: 12/13/94
Received: 12/14/94

Released by: JW

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	34.1 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.002 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.155 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	20.8 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.054 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.018 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.034 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	39.4 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.005 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	11.3 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.701 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.09 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	1.8 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	58.5 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	5.96 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.060 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.065 mg/L		0.004	RCC	ICP	12/30/94



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ARI job number: J237
ARI Sample number: H
Client: Golder
Contact: Douglas Morell
Matrix: Water
% Solids: 0.00

ID number: MW-3
Project: 933-1280
Description: Dissolved Metals
Sampled: 12/13/94
Received: 12/14/94

Released by: [Signature]

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	9.35 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.049 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	11.7 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.017 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.009 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	9.32 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.005 mg/L		0.001	RCN	GFA	12/27/94
7439-95-4	Magnesium	4.85 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.144 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.02 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	0.7 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	12/22/94
7440-21-3	Silicon	29.2 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	4.32 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.014 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.024 mg/L		0.004	RCC	ICP	12/30/94



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ARI job number: J237

ARI Sample number: F

Client: Golder

Contact: Douglas Morell

Matrix: Water

ID number: MW-4

Project: 933-1280

Description: Dissolved Metals

Sampled: 12/13/94

Received: 12/14/94

% Solids: 0.00

Released by: JW

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Consultants

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	18.8 mg/L		0.02	RCC	ICP	12/30/94
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	12/30/94
7440-38-2	Arsenic	0.002 mg/L		0.001	RCN	GFA	12/27/94
7440-39-3	Barium	0.091 mg/L		0.001	RCC	ICP	12/30/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	12/30/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	12/30/94
7440-70-2	Calcium	16.0 mg/L		0.02	RCC	ICP	12/30/94
7440-47-3	Chromium	0.026 mg/L		0.005	RCC	ICP	12/30/94
7440-48-4	Cobalt	0.010 mg/L		0.003	RCC	ICP	12/30/94
7440-50-8	Copper	0.018 mg/L		0.002	RCC	ICP	12/30/94
7439-89-6	Iron	21.2 mg/L		0.01	RCC	ICP	12/30/94
7439-92-1	Lead	0.003 mg/L		0.001	RCN	GFA	12/23/94
7439-95-4	Magnesium	7.57 mg/L		0.02	RCC	ICP	12/30/94
7439-96-5	Manganese	0.394 mg/L		0.001	RCC	ICP	12/30/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	12/27/94
7440-02-0	Nickel	0.05 mg/L		0.01	RCC	ICP	12/30/94
7440-09-7	Potassium	1.1 mg/L		0.4	RCC	ICP	12/30/94
7782-49-2	Selenium	0.005 mg/L	U	0.005	RCN	GFA	12/23/94
7440-21-3	Silicon	42.8 mg/L		0.06	RCC	ICP	12/30/94
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	12/30/94
7440-23-5	Sodium	5.11 mg/L		0.05	RCC	ICP	12/30/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	12/23/94
7440-62-2	Vanadium	0.031 mg/L		0.002	RCC	ICP	12/30/94
7440-66-6	Zinc	0.034 mg/L		0.004	RCC	ICP	12/30/94



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Hardness by the Calculation Method

Client: Golder

Project: 923-1000-103

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Units: mg CaCO₃/L

Released by: JPK

ARI Job Number	Sample ID	CA, mg/L	MG, mg/L	Hardness
J237	A	19.8	10.5	92.7
J237	B	21.3	9.28	91.4
J237	C	86.3	46.7	408
J237	D	11.8	4.84	49.4
J237	E	20.8	11.3	98.5
J237	F	16.0	7.57	71.1
J237	G	67.2	35.9	316
J237	H	11.7	4.85	49.2



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Final Report
Laboratory Analysis of Conventional Parameters

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: J237C QC Report No: J237-Golder Associates
LIMS ID: 94-21336 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MW* Date Sampled: 12/13/94
Reported: 12/30/94 Date Received: 12/14/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	12/14/94	EPA 150.1		std units	6.5
Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	81
Phenolphthalein Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	81
Conductivity	12/21/94	EPA 120.1	1.0	umhos/cm	340
Total Dissolved Solids	12/17/94	EPA 160.1	10	mg/L	240
Turbidity	12/14/94	EPA 180.1	5.0	NTU	2,800
Fluoride	12/17/94	EPA 340.2	0.10	mg/L	< 0.10 U
Chloride	12/16/94	EPA 325.2	1.0	mg/L	16
Total Cyanide	12/19/94	EPA 335.2	0.004	mg/L	0.007
N-Nitrate	12/15/94	Calculated	0.010	mg-N/L	17
N-Nitrite	12/15/94	EPA 354.1	0.010	mg-N/L	0.016
Nitrate + Nitrite (NO ₂ +NO ₃)	12/15/94	EPA 353.2	0.010	mg-N/L	17
Sulfate	12/14/94	EPA 375.2	2.5	mg/L	3.4

RL Analytical reporting limit

U Undetected at reported detection limit

Report for J237 received 12/14/94



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Final Report
Laboratory Analysis of Conventional Parameters

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: J237A QC Report No: J237-Golder Associates
LIMS ID: 94-21334 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *MWP* Date Sampled: 12/13/94
Reported: 12/30/94 Date Received: 12/14/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	12/14/94	EPA 150.1		std units	6.4
Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	46
Phenolphthalein Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	46
Conductivity	12/21/94	EPA 120.1	1.0	umhos/cm	100
Total Dissolved Solids	12/17/94	EPA 160.1	10	mg/L	83
Turbidity	12/14/94	EPA 180.1	0.50	NTU	240
Fluoride	12/17/94	EPA 340.2	0.10	mg/L	< 0.10 U
Chloride	12/16/94	EPA 325.2	1.0	mg/L	7.6
Total Cyanide	12/19/94	EPA 335.2	0.004	mg/L	< 0.004 U
N-Nitrate	12/15/94	Calculated	0.010	mg-N/L	1.2
N-Nitrite	12/15/94	EPA 354.1	0.010	mg-N/L	0.019
Nitrate + Nitrite (NO ₂ +NO ₃)	12/15/94	EPA 353.2	0.10	mg-N/L	1.2
Sulfate	12/14/94	EPA 375.2	2.5	mg/L	2.7

RL Analytical reporting limit

U Undetected at reported detection limit

Report for J237 received 12/14/94



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Laboratory Analysis of Conventional Parameters

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Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: J237D QC Report No: J237-Golder Associates
LIMS ID: 94-21337 Project: Norseland
Matrix: Water 933-1280
Data Release Authorized: *Mof* Date Sampled: 12/13/94
Reported: 12/30/94 Date Received: 12/14/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	12/14/94	EPA 150.1		std units	6.5
Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	43
Phenolphthalein Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	43
Conductivity	12/21/94	EPA 120.1	1.0	umhos/cm	91
Total Dissolved Solids	12/17/94	EPA 160.1	10	mg/L	60
Turbidity	12/14/94	EPA 180.1	0.20	NTU	72
Fluoride	12/17/94	EPA 340.2	0.10	mg/L	< 0.10 U
Chloride	12/16/94	EPA 325.2	1.0	mg/L	1.8
Total Cyanide	12/19/94	EPA 335.2	0.004	mg/L	< 0.004 U
N-Nitrate	12/15/94	Calculated	0.010	mg-N/L	0.37
N-Nitrite	12/15/94	EPA 354.1	0.010	mg-N/L	0.016
Nitrate + Nitrite (NO ₂ +NO ₃)	12/15/94	EPA 353.2	0.010	mg-N/L	0.39
Sulfate	12/14/94	EPA 375.2	2.5	mg/L	2.7

RL Analytical reporting limit

U Undetected at reported detection limit

Report for J237 received 12/14/94



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Final Report
Laboratory Analysis of Conventional Parameters

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Lab Sample ID: J237B
LIMS ID: 94-21335
Matrix: Water
Data Release Authorized: MW
Reported: 12/30/94

QC Report No: J237-Golder Associates
Project: Norseland
933-1280
Date Sampled: 12/13/94
Date Received: 12/14/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Analyte	Analysis Date	Method	RL	Units	Result
pH	12/14/94	EPA 150.1		std units	6.5
Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	47
Phenolphthalein Alkalinity	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Carbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	< 1.0 U
Bicarbonate (Alkalinity)	12/21/94	SM 2320	1.0	mg/L CaCO ₃	47
Conductivity	12/21/94	EPA 120.1	1.0	umhos/cm	100
Total Dissolved Solids	12/17/94	EPA 160.1	10	mg/L	81
Turbidity	12/14/94	EPA 180.1	0.05	NTU	28
Fluoride	12/17/94	EPA 340.2	0.10	mg/L	< 0.10 U
Chloride	12/16/94	EPA 325.2	1.0	mg/L	1.9
Total Cyanide	12/19/94	EPA 335.2	0.004	mg/L	< 0.004 U
N-Nitrate	12/15/94	Calculated	0.010	mg-N/L	1.5
N-Nitrite	12/15/94	EPA 354.1	0.010	mg-N/L	0.012
Nitrate + Nitrite (NO ₂ +NO ₃)	12/15/94	EPA 353.2	0.010	mg-N/L	1.5
Sulfate	12/14/94	EPA 375.2	2.5	mg/L	2.6

RL Analytical reporting limit

U Undetected at reported detection limit

Report for J237 received 12/14/94

ATTACHMENT 4

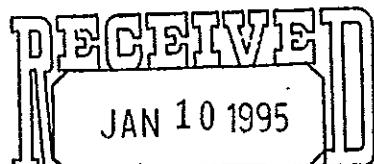
LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Resources, Incorporated
Analytical Chemists and Consultants

933-1280, 1905
Groundwater analysis

January 9, 1995



Mr. Doug Morell
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RE: Project No. 933-1280 (Norseland)
- ARI Job No. J237

Dear Mr. Morell:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. (ARI) accepted the following four water samples and a trip blank on December 14, 1994:

MW-1 MW-2 MW-3 MW-4

No discrepancies were noted on the COC. As requested, the samples were analyzed for volatile organic compounds by EPA method 8260, semivolatile organics by EPA method 8270, pesticide/PCB aroclors by EPA method 8081, total and dissolved metals (T.A.L. 23) by EPA method 6010/7000 series, and selected general chemistry parameters. No analytical complications were noted.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

-Original-

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
File: J237

BDA/dn

Chain of Custody Record & Laboratory Analysis Request

Date: 12/13/94

Page _____ of _____

ARI Client: Gilmer Services Phone #: 883-0777

Client Contact: Dave Morris

Client Project ID: 933 - 12.80

Samplers: M. Higgins/B. Beck

Sample ID	Date	Time	Matx	No Cont	Lab ID
1 MW-2	12/13/94	6:00			3 1 1 1 1 1
2 MW-4	12/13/94	6:00			3 1 1 1 1 1
3 MW-1	12/13/94	6:00			3 1 1 1 1 1
4 MW-3	12/13/94	6:00			3 1 1 1 1 1
5					
6					
7					

Comments/Special Instructions:

Relinquished by: M. Higgins
(Signature)

Printed Name: M. Higgins

Company: One United Services

Date: 12/14/94

Time: 09:30

Received by: M. Higgins
(Signature)

Printed Name: M. Higgins

Company: One United Services

Date: 12/14/94

Time: 09:30

Received by: M. Higgins
(Signature)

Printed Name: M. Higgins

Company: One United Services

Date: 12/14/94

Time: 09:30

Relinquished by:
(Signature)

Printed Name:

Company:

Date: _____

Time: _____

Received by:
(Signature)

Printed Name:

Company:

Date: _____

Time: _____

Received by:
(Signature)

Printed Name:

Company:

Date: _____

Time: _____

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.



ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

ORGANIC DATA VALIDATION SUMMARY

PROJECT NO.: 933-1280-1905	SITE: Hasseland
LABORATORY: ARI	SDG: 5237
SAMPLES/MATRIX/ANALYSES: waters	
<i>Analyses</i> mw-1 Top Blank	
mw-2	
mw-3	
mw-4	

DATA ASSESSMENT SUMMARY

Review Item	VOA	BNA	PEST PCB	PHOS. PEST	CHLOR. HERB	DIOXIN FURAN	GC	GC
1. Data Completeness	0	0	0					
2. Holding Times	0	0	0					
3. GC/MS Tuning	NA	NA	NA					
4. Instrument Performance	NA	NA	NA					
5. Calibrations	NA	NA	NA					
6. Blanks	0	0	0					
7. Surrogates	0	0	0					
8. MS/MSD	0	0	0					
9. Internal Standards	NA	NA	NA					
10. Compound Identification	NA	NA	NA					
11. Tent. Ident. Cmpds (TIC)	NA	NA	NA					
12. Result Verification	NA	NA	NA					
13. Detection Limits	0	0	0					
14. System Performance	NA	NA	NA					
15. Overall Assessment	0	0	0					

0 = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: Raw data was not provided
as per lab agreement.Validated by: *John J. Mankiewicz* Date: 01/19/85

Reviewed by: _____ Date: _____

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

1. Data package completeness (check if present)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Case narrative | <input type="checkbox"/> Instrument Det. Limits |
| <input checked="" type="checkbox"/> Chain of custody | <input type="checkbox"/> ICP Correction Factors |
| <input checked="" type="checkbox"/> Sample Results | <input type="checkbox"/> ICP Linear Ranges |
| <input checked="" type="checkbox"/> ICV/CCV Results | <input type="checkbox"/> Preparation Logs |
| <input checked="" type="checkbox"/> Blank Results | <input type="checkbox"/> Analysis Run Logs |
| <input checked="" type="checkbox"/> ICP Interference Check Results | <input type="checkbox"/> ICP Raw Data |
| <input type="checkbox"/> Spike Recovery Results | <input type="checkbox"/> GFAA Raw Data |
| <input type="checkbox"/> Duplicate Results | <input type="checkbox"/> Hg Raw Data |
| <input type="checkbox"/> LCS Results | <input type="checkbox"/> Cyanide Raw Data |
| <input type="checkbox"/> Standard Addition Results | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> ICP Serial Dilution | |

Comments/Qualified Results: _____

2. Holding times (check all that apply)

- ICP/GFAA metals completed in <6 mos from collection
 Mercury analyzed in <28 days from collection
 Cyanide completed in 14 days from collection

Comments/Qualified Results: _____

3. Calibrations (check all that apply)

- ICV/CCV %R for ICP/AA, 90%-110%, results acceptable
 ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
 ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
 ICV/CCV %R 80-120 for Hg, results acceptable
 ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
 ICV/CCV %R for Hg, <65% or >135%, reject positive results (R)
 ICV/CCV %R 85-115 for Cyanide, results acceptable
 ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
 ICV/CCV %R <70% or >130%, reject positive results (R)

Comments/Qualified Results: _____

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable	
Yes	No

4. Blanks (check all that apply)

Detects reported in ICB/CCB, list:

Detects in preparation blanks, list: Si & Na

Detects in field blanks, list:

Qualify as undetected (U) all sample concentrations $\leq 5X$ any associated blank concentrations.

Comments/Qualified Results: Silicon & sodium were detected in the lab blank at low levels. No qual. is required since all sample results $> 5 \times$ blank ass.

5. Interference Checks (check all that apply) NA

ICS A/B Recoveries Acceptable

Al, Ca, Fe, Mg sample concentrations $>$ ICS concentrations

ICS %R $> 120\%$, results $>$ IDL estimated (J)

ICS %R 50-79%, results $>$ IDL estimated (J)

ICS %R 50-79%, results $<$ IDL estimated (UJ)

ICS %R $< 50\%$, results $>$ IDL and $<$ IDL rejected (R/UR)

Comments/Qualified Results: _____

6. Laboratory Control Samples (check all that apply)

LCS %R 80-120

LCS %R 50-79% or $> 120\%$, results $>$ IDL estimated (J)

LCS %R 50-79% and results $<$ IDL estimated (UJ)

LCS %R $< 50\%$ and all results rejected (R/UR)

Comments/Qualified Results: _____

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable	
Yes	No

7. Duplicate (check all that apply)

- Duplicate RPD ≤ 20% for waters ($\leq 35\%$ for soils) for results > 5X CRDL
- Duplicate range is within \pm CRDL ($\pm 2 \times$ CRDL for soils) for results < 5X CRDL

Comments/Qualified Results: _____

8. Spike Recovery (check all that apply)

- Spike %R with 75-125%
- Spike %R 30-74%, > 125%, results > IDL estimated (J)
- Spike %R 30-74% results < IDL estimated (UJ)
- Spike %R < 30%, results < IDL rejected (UR)
- Field blank used for spike analysis

Comments/Qualified Results: _____

9. GFAA Performance

- Duplicate injection RSD < 20%
- Duplicate injection RSD > 20%, results > CRDL estimated (J)
- Analytical spike %R 85-115%
- Analytical spike %R 40-85%, results > IDL estimated (J)
- Analytical spike %R 10-40%, results < IDL estimated (UJ)
- Analytical spike %R < 10%, results < IDL rejected (UR)

Comments/Qualified Results: _____

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

10. Other QC

Comments/Qualified Results: _____

11. Field Duplicates

Field duplicate RPD \leq 20% (\leq 35% for soils)

Comments/Qualified Results: _____

12. Result Verification

All results supported in raw data

Comments/Qualified Results: _____

13. Overall Assessment

Comments/Qualified Results: _____

**Golder
Associates**

SUBJECT J237 - Gen Chem Holding Times			
Job No. 933-12801909	Made by <i>JGM</i>	Date 11/14/95	Sheet 1 of 1
Ref.	Checked	Reviewed	

<u>Analyte</u>	<u>Date of collection</u> <u>for all samples</u>	<u>MW-1</u> <u>Date # Days</u>	<u>MW-2</u> <u>Date # Days</u>	<u>MW-3</u> <u>Date # Days</u>	<u>MW-4</u> <u>Date # Days</u>
pH	12/13/94	12/14 1	12/14 1	12/14 1	12/14 1
Alk.		12/21 8	12/21 8	12/21 8	12/21 8
Phenol Alk.		12/21 8	12/21 8	12/21 8	12/21 8
Cats.		12/21 8	12/21 8	12/21 8	12/21 8
Bicats.		12/21 8	12/21 8	12/21 8	12/21 8
Cond.		12/21 8	12/21 8	12/21 8	12/21 8
TDS		12/17 4	12/17 4	12/17 4	12/17 4
Turbidity		12/14 1	12/14 1	12/14 1	12/14 1
Fluoride		12/17 4	12/17 4	12/17 4	12/17 4
Chloride		12/16 3	12/16 3	12/16 3	12/16 3
Total Cl		12/19 6	12/19 6	12/19 6	12/19 6
nitrate-N		12/15 2	12/15 2	12/15 2	12/15 2
Nitrite-N		12/15 2	12/15 2	12/15 2	12/15 2
Sulfate	↓	12/14 1	12/14 1	12/14 1	12/14 1

MARCH 1995 SAMPLING EVENT

MEMORANDUM

TO: Project File 933-1280

February 20, 1996

FR: Michael Higgins, Senior Chemist

RE: DATA EVALUATION SUMMARY FOR DATA PACKAGE J958, GROUNDWATER ANALYSIS, (933-1280, FILENAME J958.DVR)

INTRODUCTION

This memorandum presents the results of data validation and review on data package J958 prepared by Analytical Resources In. (ARI) laboratory. A list of sample evaluated along with the analyses reported and the method of analysis is provided in the following table.

SAMPLED	MEDIA	ANALYSIS	COMMENT
MW-1RE	GROUNDWATER	See Note	

Note: Analysis for total and dissolved metals

DATA QUALITY EVALUATION

Data evaluation was conducted using Bleyler 1988 (Bleyler 1988) as specified in the Norseland Work Plan (Golder 1993).

Precision

A duplicate sample was not analyzed. Goals for precision could not be assessed, however no qualification was applied.

Accuracy

Goals for accuracy were met.

Method Blanks

Goals for target analyte-free blanks were met for all analyses, with exception of boron. The attached table, Summary of Qualifications, outlines the qualification and samples affected.

Detection Limits

Detection limit goals were met for all analyses as specified in the referenced analytical method.

Completeness

A total of 2 samples were evaluated in this package with a total of 62 determinations. All analyses were deemed valid. This results in a data package which is 100 percent complete.

Overall Assessment

Overall assessment of the data indicates the data can be used without limitation in terms of meeting overall data quality objectives of the referenced analytical method.

References

Bleyler, R., 1988, Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, USEPA, Hazardous Site Evaluation Division, Washington, D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, October 1993

SUMMARY OF DATA QUALIFICATION

SDG: J958 Parameter	Validator: M Higgins Qualifier	Date: 960220 Samples Affected	Page 1 of 1 Reason
Boron	U	All	Present in Blank



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ARI job number: J958

ARI Sample number: A

Client: Golder Associates

Contact: Douglas Morell

Matrix: Water

ID number: MW-1RE

Project: 933-1280

Description: Total Metals

Sampled: 03/02/95

Received: 03/13/95

% Solids: 0.00

Released by: LM

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	12.4 mg/L		0.02	RCC	ICP	03/22/95
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	03/22/95
7440-38-2	Arsenic	0.001 mg/L		0.001	RCN	GFA	03/20/95
7440-39-3	Barium	0.064 mg/L		0.001	RCC	ICP	03/22/95
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7440-42-8	Boron	0.080 mg/L		0.006	RCC	ICP	03/22/95
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	03/22/95
7440-70-2	Calcium	42.7 mg/L		0.02	RCC	ICP	03/22/95
7440-47-3	Chromium	0.028 mg/L		0.005	RCC	ICP	03/22/95
7440-48-4	Cobalt	0.007 mg/L		0.003	RCC	ICP	03/22/95
7440-50-8	Copper	0.019 mg/L		0.002	RCC	ICP	03/22/95
7439-89-6	Iron	13.3 mg/L		0.01	RCC	ICP	03/22/95
7439-92-1	Lead	0.002 mg/L		0.001	RCN	GFA	03/20/95
7439-95-4	Magnesium	17.1 mg/L		0.02	RCC	ICP	03/22/95
7439-96-5	Manganese	0.275 mg/L		0.001	RCC	ICP	03/22/95
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	03/16/95
7439-98-7	Molybdenum	0.005 mg/L	U	0.005	RCC	ICP	03/22/95
7440-02-0	Nickel	0.02 mg/L		0.01	RCC	ICP	03/22/95
7440-09-7	Potassium	1.7 mg/L		0.4	RCC	ICP	03/22/95
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	03/16/95
7440-21-3	Silicon	31.5 mg/L		0.06	RCC	ICP	03/22/95
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	03/22/95
7440-23-5	Sodium	10.9 mg/L		0.05	RCC	ICP	03/22/95
7440-24-6	Strontium	0.199 mg/L		0.001	RCC	ICP	03/22/95
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	03/17/95

LM
6/20/20



ANALYTICAL
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Analytical
Chemists &
Consultants

ARI job number: J958 ID number: MW-1RE
ARI Sample number: A Project: 933-1280
Client: Golder Associates Description: Total Metals
Contact: Douglas Morell Sampled: 03/02/95
Matrix: Water Received: 03/13/95

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-31-5	Tin	0.01 mg/L	U	0.01	RCC	ICP	03/22/95
7440-32-6	Titanium	1.04 mg/L		0.005	RCC	ICP	03/22/95
7440-62-2	Vanadium	0.039 mg/L		0.002	RCC	ICP	03/22/95
7440-66-6	Zinc	0.031 mg/L		0.004	RCC	ICP	03/22/95

MM
9/6/20



ANALYTICAL
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ARI job number: J958
ARI Sample number: B

Client: Golder Associates
Contact: Douglas Morell
Matrix: Water

% Solids: 0.00

ID number: MW-1RE
Project: 933-1280
Description: Dissolved Metals
Sampled: 03/02/95
Received: 03/13/95

Released by: VM

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Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	1.50 mg/L		0.02	RCC	ICP	03/22/95
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	03/22/95
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	03/20/95
7440-39-3	Barium	0.013 mg/L		0.001	RCC	ICP	03/22/95
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7440-42-8	Boron	0.052 mg/L		0.006	RCC	ICP	03/22/95
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	03/22/95
7440-70-2	Calcium	39.0 mg/L		0.02	RCC	ICP	03/22/95
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	03/22/95
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	03/22/95
7440-50-8	Copper	0.005 mg/L		0.002	RCC	ICP	03/22/95
7439-89-6	Iron	1.60 mg/L		0.01	RCC	ICP	03/22/95
7439-92-1	Lead	0.001 mg/L	U	0.001	RCN	GFA	03/20/95
7439-95-4	Magnesium	14.6 mg/L		0.02	RCC	ICP	03/22/95
7439-96-5	Manganese	0.084 mg/L		0.001	RCC	ICP	03/22/95
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	03/16/95
7439-98-7	Molybdenum	0.005 mg/L	U	0.005	RCC	ICP	03/22/95
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	03/22/95
7440-09-7	Potassium	1.0 mg/L		0.4	RCC	ICP	03/22/95
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	03/16/95
7440-21-3	Silicon	15.0 mg/L		0.06	RCC	ICP	03/22/95
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	03/22/95
7440-23-5	Sodium	9.71 mg/L		0.05	RCC	ICP	03/22/95
7440-24-6	Strontium	0.168 mg/L		0.001	RCC	ICP	03/22/95
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	03/17/95

VM
3/20/20



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PAGE 2

Analytical
Chemists &
Consultants

ARI job number: J958 ID number: MW-1RE
ARI Sample number: B Project: 933-1280
Client: Golder Associates Description: Dissolved Metals
Contact: Douglas Morell Sampled: 03/02/95
Matrix: Water Received: 03/13/95

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

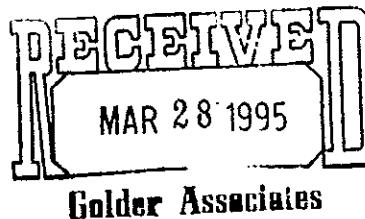
CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-31-5	Tin	0.01 mg/L	U	0.01	RCC	ICP	03/22/95
7440-32-6	Titanium	0.130 mg/L		0.005	RCC	ICP	03/22/95
7440-62-2	Vanadium	0.007 mg/L		0.002	RCC	ICP	03/22/95
7440-66-6	Zinc	0.009 mg/L		0.004	RCC	ICP	03/22/95

W.W. Goss



336
Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 27, 1995



Mr. Douglas Morell
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RE: Project No. 933-1280 (Norseland) / ARI Job No. J958

Dear Mr. Morell:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. accepted one water sample (**MW-1RE**) on March 13, 1995. No discrepancies were noted on the COC. As requested, the sample was analyzed for TAL metals. As indicated on the COC, one sample aliquot was field filtered and the second sample aliquot was not filtered. The samples were analyzed to show a comparison between total and dissolved metals.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file J958

BDA/bda

WATER ASSOCIATES INC
4104 KESTER AVE SE
BEDFORD, WA 98022

CHAIN OF CUSTODY RECORD

PROJ. NO.	SITE / LOCATION	NO. OF CONTAINERS
933-1280	HORSELAND HOMES ESTATES RESORT TO: DOLGAS MODEL	2
SAMPLE (signature) - <i>John C. Elkins</i>	DATE / TIME	SAMPLE IDENTIFICATION
1995	1600	LITTER MIN-TRE
STA. NO.	MATERIAL TYPE	DATE / TIME
	MEDIA	
REMARKS (with initials) CCL/TM/CC Amber		
SEAL NO. 17582 LUS LUS		
SEAL INTACT? (Y/N) N/A N/A IN POSSESSION		
REMARKS (with initials) CCL/TM/CC		
AMOUNT / PRESERVATIVE		
DATE / TIME		
RElinquished by : (Signature/Firm)		
Date / Time Received by : (Signature/Firm)		
Relinquished by : (Signature/Firm)		
Date / Time Received by : (Signature/Firm)		
Relinquished by : (Signature/Firm)		
Date / Time Received by : (Signature/Firm)		
Remarks (Attachments if necessary)		

J958



ANALYTICAL
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INCORPORATED

ARI job number: J958
ARI Sample number: MB

Client: Golder Associates
Contact: Douglas Morell
Matrix: Water

% Solids: 0.00

ID number:

Project: 933-1280

Description: Method Blank

Sampled: //

Received: //

Released by: CR

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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7429-90-5	Aluminum	0.02 mg/L	U	0.02	RCC	ICP	03/22/95
7440-36-0	Antimony	0.05 mg/L	U	0.05	RCC	ICP	03/22/95
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RCN	GFA	03/20/95
7440-39-3	Barium	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7440-41-7	Beryllium	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7440-42-8	Boron	0.030 mg/L		0.006	RCC	ICP	03/22/95
7440-43-9	Cadmium	0.002 mg/L	U	0.002	RCC	ICP	03/22/95
7440-70-2	Calcium	0.02 mg/L	U	0.02	RCC	ICP	03/22/95
7440-47-3	Chromium	0.005 mg/L	U	0.005	RCC	ICP	03/22/95
7440-48-4	Cobalt	0.003 mg/L	U	0.003	RCC	ICP	03/22/95
7440-50-8	Copper	0.002 mg/L	U	0.002	RCC	ICP	03/22/95
7439-89-6	Iron	0.01 mg/L	U	0.01	RCC	ICP	03/22/95
7439-92-1	Lead	0.001 mg/L	U	0.001	RCN	GFA	03/20/95
7439-95-4	Magnesium	0.02 mg/L	U	0.02	RCC	ICP	03/22/95
7439-96-5	Manganese	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	03/16/95
7439-98-7	Molybdenum	0.005 mg/L	U	0.005	RCC	ICP	03/22/95
7440-02-0	Nickel	0.01 mg/L	U	0.01	RCC	ICP	03/22/95
7440-09-7	Potassium	0.4 mg/L	U	0.4	RCC	ICP	03/22/95
7782-49-2	Selenium	0.001 mg/L	U	0.001	RCN	GFA	03/16/95
7440-21-3	Silicon	0.16 mg/L		0.06	RCC	ICP	03/22/95
7440-22-4	Silver	0.003 mg/L	U	0.003	RCC	ICP	03/22/95
7440-23-5	Sodium	0.05 mg/L		0.05	RCC	ICP	03/22/95
7440-24-6	Strontium	0.001 mg/L	U	0.001	RCC	ICP	03/22/95
7440-28-0	Thallium	0.001 mg/L	U	0.001	RCN	GFA	03/17/95

*Boron in Blank Qualification Applied
MM 10/20*

SOIL ANALYTICAL DATA

MEMORANDUM

TO: Norseland Project QA Record

September 9, 1994

FR: Sandra Schildt, Golder Associates Inc *AS*

RE: ORGANICS ANALYSES DATA VALIDATION SUMMARY FOR DATA PACKAGE: H868
(933-1280, Filename NOR868.VOA)

INTRODUCTION

This memorandum presents the results of data validation on data package H868 prepared by Analytical Resources, Inc. (ARI). A list of the samples validated along with the analytes reported and the method of analysis is provided in the following table.

SAMPLE ID	SAMPLE DATE	MEDIA	ANALYSIS
TP-7-A	7/25/94	SOIL	SEE NOTE 1
TP-7-B	7/25/94	SOIL	

Note 1: All samples were analyzed for CLP Target Compound List (TCL) volatiles (method 8260), semivolatiles (method 8270), pesticide/PCBs (method 8081), and TPH (method 418.1).

Data validation was conducted in accordance with the QAPP of the work plan (Golder 1993) and EPA validation procedures (Bleyler 1988). Attachments 1 through 5 to this memo provide the following information:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced validation criteria.

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met.

Detection Limits. Detection limit goals were met for all analyses with the exception of

semivolatiles

2-nitrophenol
hexachlorocyclopentadiene
2,4,6-trichlorophenol

2,4,5-trichlorophenol
2-nitroaniline
2,6-dinitrotoluene
2,4-dinitrotoluene
benzyl alcohol

pesticides
toxaphene

Completeness. The data package was complete for all requested analyses.

MAJOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of the data as unusable.

MINOR DEFICIENCIES

The following minor deficiencies were identified during data validation which required qualification of the data.

Blanks

- Methylene chloride and acetone were detected in the method blank. Attachments 2 and 5 provide a summary of the samples, data qualifications applied and supporting documentation.

REFERENCES

Bleyer 1988, Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1, 1988. U.S. Environmental Protection Agency, Washington D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, July 27, 1993. Golder Associates, Redmond, Washington.

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected in the associated laboratory blank. This qualifier is applied by the laboratory. During the process of data validation this qualifier may be replaced by other appropriate qualifiers as defined by the validation procedures. The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- NJ - Indicates presumptive evidence of a constituent at an estimated value. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- N - Indicates presumptive evidence of a constituent. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- JN - Indicates a tentatively identified compound (TIC) whose concentration and identification have been determined to be valid as a result of data validation. The associated data should be considered usable for decision making purposes.
- UJN - Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected due to associated blank contamination.
- UR - Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY - FORM B-7

ATTACHMENT 3

ANNOTATED LABORATORY REPORTS

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 1



Sample No: TP-7-A

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: H868A QC Report No: H868-Golder Associates
LIMS ID: 94-12080 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *BNC* Date Sampled: 07/25/94
Reported: 08/02/94 Date Received: 07/25/94

Instrument: FINN5 Sample Amount: 2.97 g dry Wt
Date Analyzed: 07/30/94 Percent Moisture: 41.1%

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/kg
74-87-3	Chloromethane	3.4 U
74-83-9	Bromomethane	3.4 U
75-01-4	Vinyl Chloride	3.4 U
75-00-3	Chloroethane	3.4 U
75-09-2	Methylene Chloride	3.9 B U
67-64-1	Acetone	47 B U
75-15-0	Carbon Disulfide	2.6
75-35-4	1,1-Dichloroethene	1.7 U
75-34-3	1,1-Dichloroethane	1.7 U
156-60-5	trans-1,2-Dichloroethene	1.7 U
156-59-2	cis-1,2-Dichloroethene	1.7 U
67-66-3	Chloroform	1.7 U
107-06-2	1,2-Dichloroethane	1.7 U
78-93-3	2-Butanone	16
71-55-6	1,1,1-Trichloroethane	1.7 U
56-23-5	Carbon Tetrachloride	1.7 U
108-05-4	Vinyl Acetate	8.4 U
75-27-4	Bromodichloromethane	1.7 U
78-87-5	1,2-Dichloropropane	1.7 U
10061-01-5	cis-1,3-Dichloropropene	1.7 U
79-01-6	Trichloroethene	1.7 U
124-48-1	Dibromochloromethane	1.7 U
79-00-5	1,1,2-Trichloroethane	1.7 U
71-43-2	Benzene	1.7
10061-02-6	trans-1,3-Dichloropropene	1.7 U
110-75-8	2-Chloroethylvinylether	8.4 U
75-25-2	Bromoform	1.7 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	8.4 U
591-78-6	2-Hexanone	8.4 U
127-18-4	Tetrachloroethene	1.7 U
79-34-5	1,1,2,2-Tetrachloroethane	1.7 U
108-88-3	Toluene	1.7 U
108-90-7	Chlorobenzene	2.0 UJ
100-41-4	Ethylbenzene	6.9
100-42-5	Styrene	1.7 U
75-69-4	Trichlorofluoromethane	3.4 U
76-13-1	1,1,2-Trichlorotrifluoroethane	3.4 U
1330-20-7	Total Xylenes	9.7

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.3%
d8-Toluene	101%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	100%

X 9/9/94

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 1



Sample No: TP-7-B

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: H868B QC Report No: H868-Golder Associates
LIMS ID: 94-12081 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *ANS* Date Sampled: 07/25/94
Reported: 08/02/94 Date Received: 07/25/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Instrument: FINN5 Sample Amount: 4.39 g dry Wt
Date Analyzed: 07/30/94 Percent Moisture: 13.4%

CAS Number	Analyte	ug/kg
74-87-3	Chloromethane	2.3 U
74-83-9	Bromomethane	2.3 U
75-01-4	Vinyl Chloride	2.3 U
75-00-3	Chlooroethane	2.3 U
75-09-2	Methylene Chloride	3.3 B <i>UL</i>
67-64-1	Acetone	95 B
75-15-0	Carbon Disulfide	1.1 U
75-35-4	1,1-Dichloroethene	1.1 U
75-34-3	1,1-Dichloroethane	1.1 U
156-60-5	trans-1,2-Dichloroethene	1.1 U
156-59-2	cis-1,2-Dichloroethene	1.1 U
67-66-3	Chloroform	1.1 U
107-06-2	1,2-Dichloroethane	1.1 U
78-93-3	2-Butanone	26
71-55-6	1,1,1-Trichloroethane	1.1 U
56-23-5	Carbon Tetrachloride	1.1 U
108-05-4	Vinyl Acetate	5.7 U
75-27-4	Bromodichloromethane	1.1 U
78-87-5	1,2-Dichloropropane	1.1 U
10061-01-5	cis-1,3-Dichloropropene	1.1 U
79-01-6	Trichloroethene	1.1 U
124-48-1	Dibromochloromethane	1.1 U
79-00-5	1,1,2-Trichloroethane	1.1 U
71-43-2	Benzene	1.1 U
10061-02-6	trans-1,3-Dichloropropene	1.1 U
110-75-8	2-Chloroethylvinylether	5.7 U
75-25-2	Bromoform	1.1 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.7 U
591-78-6	2-Hexanone	5.7 U
127-18-4	Tetrachloroethene	1.1 U
79-34-5	1,1,2,2-Tetrachloroethane	1.1 U
108-88-3	Toluene	1.1 U
108-90-7	Chlorobenzene	1.1 U
100-41-4	Ethylbenzene	6.0
100-42-5	Styrene	1.1 U
75-69-4	Trichlorofluoromethane	2.3 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.3 U
1330-20-7	Total Xylenes	8.3

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	103%
d8-Toluene	106%
Bromofluorobenzene	105%
d4-1,2-Dichlorobenzene	103%

*ANALYTICAL
RESOURCES
INCORPORATED
9/1/94*

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Page 1 of 1



Sample No: Trip Blank

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: H868C QC Report No: H868-Golder Associates
LIMS ID: 94-12082 Project: Norseland
Matrix: Water 923-1280
Data Release Authorized: *BW* Date Sampled: 07/21/94
Reported: 08/02/94 Date Received: 07/25/94

Instrument: FINNIS Sample Amount: 5.00 mL
Date Analyzed: 07/30/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	Total Xylenes	2.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	106%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	106%

X 7/9/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 1 of 2

Sample No: TP-7-A

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: H868A QC Report No: H868-Golder Associates
LIMS ID: 94-12080 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *BWES* Date Sampled: 07/25/94
Reported: 08/18/94 Date Received: 07/25/94

Date extracted: 08/04/94
Date analyzed: 08/16/94
Instrument: FINN2
GPC Cleanup: YES

Sample Amount: 21.3 g-dry-wt
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: 30.3%
pH: 7.4

CAS Number	Analyte	ug/kg
108-95-2	Phenol	190 U
111-44-4	Bis-(2-Chloroethyl) Ether	94 U
95-57-8	2-Chlorophenol	94 U
541-73-1	1,3-Dichlorobenzene	94 U
106-46-7	1,4-Dichlorobenzene	140
100-51-6	Benzyl Alcohol	470 U
95-50-1	1,2-Dichlorobenzene	94 U
95-48-7	2-Methylphenol	94 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	94 U
106-44-5	4-Methylphenol	290
621-64-7	N-Nitroso-Di-N-Propylamine	94 U
67-72-1	Hexachloroethane	190 U
98-95-3	Nitrobenzene	94 U
78-59-1	Isophorone	94 U
88-75-5	2-Nitrophenol	470 U
105-67-9	2,4-Dimethylphenol	190 U
65-85-0	Benzoic Acid	940 U
111-91-1	bis(2-Chloroethoxy) Methane	94 U
120-83-2	2,4-Dichlorophenol	280 U
120-82-1	1,2,4-Trichlorobenzene	94 U
91-20-3	Naphthalene	2,100
106-47-8	4-Chloroaniline	280 U
87-68-3	Hexachlorobutadiene	190 U
59-50-7	4-Chloro-3-methylphenol	190 U
91-57-6	2-Methylnaphthalene	770
77-47-4	Hexachlorocyclopentadiene	470 U
88-06-2	2,4,6-Trichlorophenol	470 U
95-95-4	2,4,5-Trichlorophenol	470 U
91-58-7	2-Chloronaphthalene	94 U
88-74-4	2-Nitroaniline	470 U
131-11-3	Dimethylphthalate	94 U
208-96-8	Acenaphthylene	94 U
99-09-2	3-Nitroaniline	470 U
83-32-9	Acenaphthene	94 U
51-28-5	2,4-Dinitrophenol	940 U
100-02-7	4-Nitrophenol	470 U
132-64-9	Dibenzofuran	94 U
606-20-2	2,6-Dinitrotoluene	470 U

11/19/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 2 of 2

Sample No: TP-7-A

Analytical
Chemists &
Consultants

Lab Sample ID: H868A QC Report No: H868-Golder Associates
LIMS ID: 94-12080 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *BWS* Date Sampled: 07/25/94
Reported: 08/18/94 Date Received: 07/25/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/04/94
Date analyzed: 08/16/94
Instrument: FINN2
GPC Cleanup: YES

Sample Amount: 21.3 g-dry-wt
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: 30.3%
pH: 7.4

CAS Number	Analyte	ug/kg
121-14-2	2,4-Dinitrotoluene	470 U
84-66-2	Diethylphthalate	130
7005-72-3	4-Chlorophenyl-phenylether	94 U
86-73-7	Fluorene	94 U
100-01-6	4-Nitroaniline	470 U
534-52-1	4,6-Dinitro-2-Methylphenol	940 U
86-30-6	N-Nitrosodiphenylamine	94 U
101-55-3	4-Bromophenyl-phenylether	94 U
118-74-1	Hexachlorobenzene	94 U
87-86-5	Pentachlorophenol	470 U
85-01-8	Phenanthrene	94 U
86-74-8	Carbazole	94 U
120-12-7	Anthracene	94 U
84-74-2	Di-n-Butylphthalate	94 U
206-44-0	Fluoranthene	94 U
129-00-0	Pyrene	94 U
85-68-7	Butylbenzylphthalate	94 U
91-94-1	3,3'-Dichlorobenzidine	470 U
56-55-3	Benzo(a)anthracene	94 U
117-81-7	bis(2-Ethylhexyl)phthalate	2,000
218-01-9	Chrysene	94 U
117-84-0	Di-n-Octyl phthalate	94 U
205-99-2	Benzo(b)fluoranthene	94 U
207-08-9	Benzo(k)fluoranthene	94 U
50-32-8	Benzo(a)pyrene	94 U
193-39-5	Indeno(1,2,3-cd)pyrene	94 U
53-70-3	Dibenz(a,h)anthracene	94 U
191-24-2	Benzo(g,h,i)perylene	94 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	74.0%	d5-Phenol	77.0%
2-Fluorobiphenyl	83.5%	2-Fluorophenol	73.5%
d14-p-Terphenyl	86.9%	2,4,6-Tribromophenol	98.2%
d4-1,2-Dichlorobenzene	64.3%	d4-2-Chlorophenol	75.7%

XV
9/19/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 1 of 2

Sample No: TP-7-B

Analytical
Chemists &
Consultants

Lab Sample ID: H868B QC Report No: H868-Golder Associates
LIMS ID: 94-12081 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *JWQ* Date Sampled: 07/25/94
Reported: 08/18/94 Date Received: 07/25/94

333 Ninth Ave. North
Seattle, WA 98109-5187.
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/04/94 Sample Amount: 25.3 g-dry-wt
Date analyzed: 08/16/94 Final Extract Volume: 2.0 ml
Instrument: FINN2 Dilution Factor: 1:1
GPC Cleanup: YES Percent Moisture: 16.1%
pH: 7.7

CAS Number	Analyte	ug/kg
108-95-2	Phenol	160 U
111-44-4	Bis-(2-Chloroethyl) Ether	79 U
95-57-8	2-Chlorophenol	79 U
541-73-1	1,3-Dichlorobenzene	79 U
106-46-7	1,4-Dichlorobenzene	79 U
100-51-6	Benzyl Alcohol	390 U
95-50-1	1,2-Dichlorobenzene	79 U
95-48-7	2-Methylphenol	79 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	79 U
106-44-5	4-Methylphenol	170
621-64-7	N-Nitroso-Di-N-Propylamine	79 U
67-72-1	Hexachloroethane	160 U
98-95-3	Nitrobenzene	79 U
78-59-1	Isophorone	79 U
88-75-5	2-Nitrophenol	390 U
105-67-9	2,4-Dimethylphenol	160 U
65-85-0	Benzoic Acid	790 U
111-91-1	bis(2-Chloroethoxy) Methane	79 U
120-83-2	2,4-Dichlorophenol	240 U
120-82-1	1,2,4-Trichlorobenzene	79 U
91-20-3	Naphthalene	620
106-47-8	4-Chloroaniline	240 U
87-68-3	Hexachlorobutadiene	160 U
59-50-7	4-Chloro-3-methylphenol	160 U
91-57-6	2-Methylnaphthalene	450
77-47-4	Hexachlorocyclopentadiene	390 U
88-06-2	2,4,6-Trichlorophenol	390 U
95-95-4	2,4,5-Trichlorophenol	390 U
91-58-7	2-Chloronaphthalene	79 U
88-74-4	2-Nitroaniline	390 U
131-11-3	Dimethylphthalate	79 U
208-96-8	Acenaphthylene	79 U
99-09-2	3-Nitroaniline	390 U
83-32-9	Acenaphthene	79 U
51-28-5	2,4-Dinitrophenol	790 U
100-02-7	4-Nitrophenol	390 U
132-64-9	Dibenzofuran	79 U
606-20-2	2,6-Dinitrotoluene	390 U

10/16/94
9/1/01



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
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Sample No: TP-7-B

Analytical
Chemists &
Consultants

Lab Sample ID: H868B
LIMS ID: 94-12081
Matrix: Soil
Data Release Authorized: *RWB*
Reported: 08/18/94

QC Report No: H868-Golder Associates
Project: Norseland
923-1280
Date Sampled: 07/25/94
Date Received: 07/25/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 08/04/94
Date analyzed: 08/16/94
Instrument: FINN2
GPC Cleanup: YES

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: 16.1%
pH: 7.7

CAS Number	Analyte	ug/kg
121-14-2	2,4-Dinitrotoluene	390 U
84-66-2	Diethylphthalate	97
7005-72-3	4-Chlorophenyl-phenylether	79 U
86-73-7	Fluorene	79 U
100-01-6	4-Nitroaniline	390 U
534-52-1	4,6-Dinitro-2-Methylphenol	790 U
86-30-6	N-Nitrosodiphenylamine	79 U
101-55-3	4-Bromophenyl-phenylether	79 U
118-74-1	Hexachlorobenzene	79 U
87-86-5	Pentachlorophenol	390 U
85-01-8	Phenanthrene	88
86-74-8	Carbazole	79 U
120-12-7	Anthracene	79 U
84-74-2	Di-n-Butylphthalate	140
206-44-0	Fluoranthene	79 U
129-00-0	Pyrene	79 U
.85-68-7	Butylbenzylphthalate	79 U
91-94-1	3,3'-Dichlorobenzidine	390 U
56-55-3	Benzo(a)anthracene	79 U
117-81-7	bis(2-Ethylhexyl)phthalate	3,800
218-01-9	Chrysene	79 U
117-84-0	Di-n-Octyl phthalate	79 U
205-99-2	Benzo(b)fluoranthene	79 U
207-08-9	Benzo(k)fluoranthene	79 U
50-32-8	Benzo(a)pyrene	79 U
193-39-5	Indeno(1,2,3-cd)pyrene	79 U
53-70-3	Dibenz(a,h)anthracene	79 U
191-24-2	Benzo(g,h,i)perylene	79 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	72.2%	d5-Phenol	79.6%
2-Fluorobiphenyl	90.9%	2-Fluorophenol	78.2%
d14-p-Terphenyl	95.2%	2,4,6-Tribromophenol	97.0%
d4-1,2-Dichlorobenzene	67.7%	d4-2-Chlorophenol	79.3%

HSD
01/09/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: TP-7-A

Analytical
Chemists &
Consultants

Lab Sample ID: H868A
LIMS ID: 94-12080
Matrix: Soil

QC Report No: H868-Golder Associates
Project: Norseland
 923-1280
Date Sampled: 07/25/94
Date Received: 07/25/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 08/30/94

Date extracted: 08/04/94
Date analyzed: 08/24/94

GPC Cleanup: YES

Sample Amount: 21.3 g-dry-wt
Final Extract Volume: 20 ml
Dilution Factor: 1:1
Sulfur Cleanup: YES
Percent Moisture: 30.3%
pH: 7.4

CAS Number	Analyte	ug/kg
319-84-6	alpha-BHC	4.7 U
319-85-7	beta-BHC	4.7 U
319-86-8	delta-BHC	4.7 U
58-89-9	gamma-BHC (Lindane)	4.7 U
76-44-8	Heptachlor	4.7 U
309-00-2	Aldrin	4.7 U
1024-57-3	Heptachlor Epoxide	4.7 U
959-98-8	Endosulfan I	4.7 U
60-57-1	Dieldrin	9.4 U
72-55-9	4,4'-DDE	9.4 U
72-20-8	Endrin	9.4 U
33213-65-9	Endosulfan II	9.4 U
72-54-8	4,4'-DDD	9.4 U
1031-07-8	Endosulfan Sulfate	9.4 U
50-29-3	4,4'-DDT	9.4 U
72-43-5	Methoxychlor	47 U
53494-70-5	Endrin Ketone	9.4 U
7421-36-3	Endrin Aldehyde	9.4 U
57-74-9	gamma Chlordane	4.7 U
5103-71-9	alpha Chlordane	4.7 U
8001-35-2	Toxaphene	470 U
	Aroclor 1016/1242	94 U
12672-29-6	Aroclor 1248	94 U
11097-69-1	Aroclor 1254	94 U
11096-82-5	Aroclor 1260	94 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 74.1%
Tetrachloromethylene 56.6%

4/9/94



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: TP-7-B

Analytical
Chemists &
Consultants

Lab Sample ID: H868B
LIMS ID: 94-12081
Matrix: Soil

QC Report No: H868-Golder Associates
Project: Norseland
923-1280
Date Sampled: 07/25/94
Date Received: 07/25/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized: *Phyllis*
Reported: 08/30/94

Date extracted: 08/04/94
Date analyzed: 08/23/94

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 20 ml
Dilution Factor: 1:1

GPC Cleanup: YES

Percent Moisture: 16.1%
pH: 7.7

CAS Number	Analyte	ug/kg
319-84-6	alpha-BHC	4.0 U
319-85-7	beta-BHC	4.0 U
319-86-8	delta-BHC	5.9 X U
58-89-9	gamma-BHC (Lindane)	4.0 U
76-44-8	Heptachlor	4.0 U
309-00-2	Aldrin	4.0 U
1024-57-3	Heptachlor Epoxide	4.0 U
959-98-8	Endosulfan I	4.0 U
60-57-1	Dieldrin	7.9 U
72-55-9	4,4'-DDE	7.9 U
72-20-8	Endrin	7.9 U
33213-65-9	Endosulfan II	7.9 U
72-54-8	4,4'-DDD	7.9 U
1031-07-8	Endosulfan Sulfate	7.9 U
50-29-3	4,4'-DDT	7.9 U
72-43-5	Methoxychlor	40 U
53494-70-5	Endrin Ketone	7.9 U
7421-36-3	Endrin Aldehyde	7.9 U
57-74-9	gamma Chlordane	4.0 U
5103-71-9	alpha Chlordane	4.0 U
8001-35-2	Toxaphene	400 U
12672-29-6	Aroclor 1016/1242	79 U
11097-69-1	Aroclor 1248	79 U
11096-82-5	Aroclor 1254	79 U
	Aroclor 1260	79 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 76.8%
Tetrachloromethylene 61.2%

9/10/04



ANALYTICAL
RESOURCES
INCORPORATED

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 418.1 - IR Scan

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Matrix: Soil QC Report No: H868-Golder Associates

Project: Norseland

923-1280

Data Release Authorized: *MMW*

Date Received: 07/25/94

Reported: 07/29/94

Lab ID	Client Sample ID	Date Analyzed	Dilution Factor	Total Petroleum Hydrocarbons (mg/kg)
H868-0728MB	Method Blank	07/28/94	1:1	10 U
94-12080-H868A	TP-7-A	07/28/94	1:1	53
94-12080-H868Ad	TP-7-A-DUPL	07/28/94	1:1	32
94-12080-H868At	TP-7-A-TRIP	07/28/94	1:1	25
94-12081-H868B	TP-7-B	07/28/94	1:1	84

Values reported in ppm (mg/kg) on a dry weight basis.

Data Qualifiers

U Compound not detected at the given detection limit.

ATTACHMENT 4

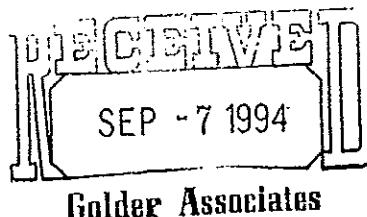
LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 1, 1994

Mr. Douglas Morell
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052



RE: Project No. 933-1280 (Norseland) / ARI Job No. H868

Dear Mr. Morell:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. accepted two soil samples (TP-7-A and TP-7-B) and a VOA trip blank in good condition on July 25, 1994. No discrepancies were noted on the COC.

Samples were analyzed for volatile organic compounds by EPA method 8260, semivolatile organic compounds by EPA method 8270, total petroleum hydrocarbons by EPA method 418.1, pesticides/PCB Aroclors by EPA method 8081, and metals by EPA method 6010/7000. With the exception of the pesticide/PCBs, a copy of the data was supplied to you by facsimile on August 25, 1994. The pesticide/PCB results were supplied to you on August 31, 1994.

As we discussed by telephone on August 25, the laboratory encountered some delays with the pesticide results due to over scheduling. I apologize for any inconvenience you may have encountered due to these delays.

For the initial metals analysis, matrix spike and duplicate recoveries did not meet in-house control limits for lead. The laboratory performed a sample reanalysis which confirmed the initial QC run. Only the initial sample results have been included with this sample delivery group.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file H868

BDA/dn

*Yardley
9/10/94*

Chain of Custody Record & Laboratory Analysis Request

Date: July 25/1994 H868
 Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

ARI Client: **Golder Associates** Phone #: (606) 883-0277

Client Contact: **Douglas Morell**

Client Project ID: **923-1280 Norceland**

Samplers: **Douglas Morell**

Sample ID	Date	Time	Matx	No Cont	Lab ID	Analysis Required		Notes/Comments
						PCB's	Cd	
1 TP-7-A (00)	7/25/94	10:30	Soil	6-714		✓		
2 TP-7-A (903)	7/25/94	10:30	Soil	6-715		✓		
3 TP-7-A (93)	7/25/94	10:36	Soil	6-715		✓	✓	
4 TP-7-B (00)	7/25/94	10:40	Soil	10-114		✓		
5 TP-7-B (93)	7/25/94	10:40	Soil	10-114		✓	✓	
6 TP-7-B (903)	7/25/94	10:40	Soil	10-114		✓	✓	
7								
Comments/Special Instructions:	Relinquished by: (Signature)		Relinquished by: (Signature)		Relinquished by: (Signature)		Relinquished by: (Signature)	
	Printed Name: Douglas Morell		Printed Name: Douglas Morell		Printed Name: Douglas Morell		Printed Name: Douglas Morell	
	Company: Golder Assoc		Company: Golder Assoc		Company: Golder Assoc		Company: Golder Assoc	
	Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm	
	Received by: Chris Shoberg (Signature)		Received by: Chris Shoberg (Signature)		Received by: Chris Shoberg (Signature)		Received by: Chris Shoberg (Signature)	
	Printed Name: Chris Shoberg		Printed Name: Chris Shoberg		Printed Name: Chris Shoberg		Printed Name: Chris Shoberg	
	Company: ARI		Company: ARI		Company: ARI		Company: ARI	
	Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm		Date: 7/25/94 Time: 1:45 pm	

Limit of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.

ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

ORGANIC DATA VALIDATION SUMMARY

PROJECT NO.: 933-1280	SITE: Norwegian
LABORATORY: ART	SDG:
SAMPLES/MATRIX/ANALYSES: TP-7-A, TP-7-B / soil / VOA, BNA, Pest.	

DATA ASSESSMENT SUMMARY

Review Item	VOA	BNA	PEST PCB	PHOS. PEST	CHLOR. HERB	DIOXIN FURAN	GC	GC
1. Data Completeness	C	C	O					
2. Holding Times	O	O	O					
3. GC/MS Tuning	—	—	—					
4. Instrument Performance	—	—	—					
5. Calibrations	—	—	—					
6. Blanks	C	C	O					
7. Surrogates	O	O	O					
8. MS/MSD	O	O	O					
9. Internal Standards	—	—	—					
10. Compound Identification	—	—	—					
11. Tent. Ident. Cmpds (TIC)	—	—	—					
12. Result Verification	—	—	—					
13. Detection Limits	—	—	—					
14. System Performance	—	—	—					
15. Overall Assessment	—	—	—					

O = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: not reportedValidated by: Janet Schiltz Date: 9/9/94Reviewed by: Mission Y Jumper Date: 9/9/94

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

1. Data Completeness (check if present)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Case narrative
<input checked="" type="checkbox"/> Chain of Custody
<input checked="" type="checkbox"/> Sample Analysis Request
<input checked="" type="checkbox"/> Sample Results
<input checked="" type="checkbox"/> Detection Limits
<input checked="" type="checkbox"/> GC/MS Tuning
<input checked="" type="checkbox"/> Initial Calibration Data
<input checked="" type="checkbox"/> Continuing Calibration Data | <input checked="" type="checkbox"/> Blank Results
<input checked="" type="checkbox"/> Surrogate Results
<input checked="" type="checkbox"/> MS/MSD Results
<input checked="" type="checkbox"/> Internal Standards Performance
<input checked="" type="checkbox"/> Raw Data
<input checked="" type="checkbox"/> Sample Preparation Data
<input checked="" type="checkbox"/> Standards Preparation Data |
|--|---|

Comments/Action Taken: _____

2. Holding Times (check all that apply)

- Unpreserved VOA samples analyzed in 7 days from collection
- Preserved VOA samples analyzed in 14 days from collection
- BNA samples extracted in 7 days (14 days soils) from collection
- BNA extracts analyzed in 40 days from extraction
- Pest/PCB samples extracted in 7 days (14 days soils) from collection
- Pest/PCB extracts analyzed in 40 days from extraction

Qualify as estimated (J/UJ) all results analyzed past the holding time limits listed above but within 2x the limit. Qualify detects as estimated (J) and non-detects unusable (UR) for results analyzed greater than 2x the above limits.

Comments/Qualified Results: Semi-volatile extracted beyond holding time, qualified as estimated (J/UJ) samples are Axoil : no qualification required.

3. GC/MS Tuning

- GC/MS tuning performed
- GC/MS tuning within control limits
- GC/MS tuning outside control limits (qualify R/UR)

Comments/Qualified Results: Tuning data not provided

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

4. Instrument Performance

- DDT Retention Time Acceptable (packed columns) / Resolution Acceptable (All Columns) (if no, R detects)
- Standard Checks within Retention Time Window (if no, check against expanded windows and if outside, qualify R/UR)
- DDT and/or Endrin Breakdowns > 20% (J/UR DDT and Endrin, NJ all breakdown product hits)
- DBC, TCMX or DCBP retention time checks within SOW limits (if no, R/UR)

Comments/Qualified Results: Instrument performance data not provided

5. Initial and Continuing Calibration

GC/MS Data

- Initial calibration performed
- Initial calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
- Initial calibration RSDs $\leq 30\%$ for all compounds (if no, J/UJ)
- Continuing calibration performed
- Continuing calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
- Continuing calibration %D $\leq 25\%$ for all compounds (if no, J/UJ)

Pesticide/PCB data

- RSD $\leq 10\%$ for performance checks (if no, J detects)
- All standards analyzed prior to sample analysis, confirmation standards analyzed at proper frequency
- Continuing calibration %D $\leq 15\%$ for quantitation ($\leq 20\%$ for confirmation) (if no, J all detects)

Comments/Qualified Results: Calibration data not provided

6. Blanks ✓

Method blanks analyzed

Common Laboratory Contaminants Detected

- | | |
|--|-------------------------------------|
| <input checked="" type="checkbox"/> Methylene chloride | <input type="checkbox"/> Toluene |
| <input checked="" type="checkbox"/> Acetone detected | <input type="checkbox"/> 2-Butanone |

Phthalates detected (list or attach summary sheet)

TCAs detected (list or attach summary sheet)

Quality sample results <10x above as U at SQL

Non-common Laboratory Contaminants

Other TCL compounds detected (list or attach summary sheet)

Quality sample results <5x above as U at SQL

Comments/Qualified Results: No pesticides in blanks, no VOCs in blanks, no SVOCs in blanks.

No compounds detected in trip blank.
Methylene chloride and acetone qualified as undetected (u)

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

7. Surrogates

Note: Surrogate limits apply if at least one volatile or pesticide/PCB surrogate is out of specification and at least two semivolatile surrogates are out of specification.

- Surrogates analyzed
- Surrogate recoveries within method control limits
- Surrogate recoveries above method control limits (J detects only)
- Surrogate recoveries below method control limits but $\geq 10\%$ (J/UJ)
- Surrogate recoveries below 10% (J/UR)

Pest recoveries < 60%, no positive results, no qualification.

8. Matrix Spike/Matrix Spike Duplicate

- MS/MSD analyzed
- MS/MSD recoveries within method control limits
- MS/MSD recoveries above method control limits (J detects only)
- MS/MSD recoveries below method control limits but $\geq 10\%$ (J/UJ)
- MS/MSD recoveries below 10%, and surrogates are out (J/UR)

Comments/Qualified Results:

9. Internal Standards Performance

- Internal standards added to all samples and QC
- Internal standard areas within control limits
- Internal standard areas outside control limits but greater than 10% (J/UJ)
- Internal standard areas are zero or less than 10% (J/UR)
- Internal standard RTs within ± 30 second windows (if no, J/UJ)

Comments/Qualified Results: Internal standards data not provided

10. Compound Identification

- Library search data provided for positive results (if no and data is required, request from the laboratory)
- Positive results within RT criteria for dual column confirmation (Pesticide/PCB data only) (if no, qualify detect as U)
- Compound ID within ± 0.06 RRT of standard (if no, qualify as J if spectral match okay)
- Mass spectral match acceptable (if no, qualify as R)

Comments/Qualified Results: Raw data not provided

ORGANIC DATA VALIDATION SUMMARY

	Acceptable Yes No
11. Tentatively Identified Compounds (TIC)	_____

- TIC's searched (10/20 largest non-Aldol VOA's/Semi-VOA's)
- TIC's identified properly
- TIC's present in blank and samples (qualify according to 5x rule)
- Common laboratory contaminants reported as TIC's (qualify the following as rejected [CO₂ (m/z 44), siloxanes (m/z 73), diethyl ether, hexane, freons, phthalates <100 ug/L or <4000 ug/Kg, cyclohexene derivatives, aldehydes or hydroxy ketones and hydroxy aldehydes])
- Qualify valid TICs as JN

Comments/Qualified Results: TIC data not provided

12. Result Verification

- All results supported in raw data
- Transcription errors identified (note constituent(s) and changes below)
- Calculation errors identified (note constituent(s) and changes below)

Comments/Qualified Results: Raw data not provided

13. Detection Limits

- Sample quantitation limits (SQLs) meet the project requirements (note discrepancies below)

Comments/Qualified Results: See section 15 comments

14. System Performance

- Baseline anomalies noted which affect quantitation (J/UJ)
- High background MS levels noted which affect quantitation (J/UJ)
- Extraneous or coeluting peaks affecting quantitation (J/UJ)
- Poor resolution (J/UJ)
- Peak tailing/peak splitting affecting quantitation (J/UJ)

Comments/Qualified Results: Raw data not provided

ORGANIC DATA VALIDATION SUMMARY

15. Overall Assessment

Comments/Qualified Results: The following semivolatiles:

2-nitrophenol

Hexachlorocyclopentadecane

2,4,6-trichlorophenol

2,4,5-trichlorophenol

2-nitroaniline

2,6-dinitrotoluene

2,4-dinitrotoluene

Benzyl alcohol

and pesticides:

Tolaphene

Detection limits were > CRQL

Delta-BHC was not detected at a raised detection limit and qualified with a "Y", it has been changed to U.

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
Page 1 of 1



Sample No: Method Blank

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: 072994MB QC Report No: H868-Golder Associates
LIMS ID: 94-12080 Project: Norseland
Matrix: Soil 923-1280
Data Release Authorized: *BMS* Date Sampled: NA
Reported: 08/02/94 Date Received: NA

Instrument: FINN5 Sample Amount: 5.00 g dry Wt Equiv
Date Analyzed: 07/29/94 Percent Moisture: NA

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/kg
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.6
67-64-1	Acetone	5.4
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloroproppane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	Total Xylenes	2.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	99.2%
Bromofluorobenzene	93.4%
d4-1,2-Dichlorobenzene	98.8%

MEMORANDUM

TO: Norseland Project QA Record

September 9, 1994

FR: Sandra Schildt, Golder Associates Inc. *(S.S.)*RE: METALS ANALYSIS DATA VALIDATION SUMMARY FOR DATA PACKAGE: H868
(933-1280, Filename NOR868.INO)

INTRODUCTION

This memorandum presents the results of data validation on data package H868 prepared by Analytical Resources, Inc. (ARI). A list of the samples validated along with the analytes reported and the method of analysis is provided in the following table.

SAMPLE ID	SAMPLE DATE	MEDIA	ANALYSIS
TP-7-A	7/25/94	SOIL	SEE NOTE 1
TP-7-B	7/25/94	SOIL	

Note 1: All samples were analyzed for priority pollutant metals using method 6010/7000.

Data validation was conducted in accordance with the QAPP of the work plan (Golder 1993) and EPA validation procedures (Bleyler 1988). Attachments 1 through 5 to this memo provide the following information:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced validation criteria.

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met with the exception of the minor deficiencies identified below.

Detection Limits. Detection limit goals were met for all analyses.

Completeness. The data package was complete for all reported analyses.

MAJOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of the data as unusable.

MINOR DEFICIENCIES

The following is a summary of the minor deficiencies identified during validation which required qualification of data.

Matrix Spikes

- Matrix spike recovery was unacceptable for antimony and lead. Attachment 2 and 5 provide a summary of the samples, data qualifications applied and supporting documentation.

REFERENCES

Bleyer 1988, Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, February 1, 1988. U.S. Environmental Protection Agency, Washington D.C.

Golder 1993, Department of Ecology Draft Phase I Remedial Investigation/Feasibility Study Work Plan, July 27, 1993. Golder Associates, Redmond, Washington.

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF INORGANIC DATA REPORTING QUALIFIERS

- B - Indicates the constituent was analyzed for and detected. The concentration reported is less than the contract required detection limit (CRDL) but greater than the instrument detection limit (IDL). The associated data should be considered usable for decision making purposes.
- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample detection limit corrected for sample aliquot size, dilution factors and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and was not detected. Due to a minor quality control deficiency identified during data validation, the concentration reported may not accurately reflect the sample detection limit. The associated data have been qualified as estimated but should be considered usable for decision making purposes.
- BJ - Indicates the constituent was analyzed for and detected at a concentration less than the CRDL but greater than the IDL. Due to a minor quality control deficiency identified during data validation, The associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. Due to a minor quality control deficiency identified during data validation the associated data have been qualified as estimated, but should be considered usable for decision making purposes.
- UR - Indicates the constituent was analyzed for and not detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.
- R - Indicates the constituent was analyzed for and detected. Due to a major quality control deficiency identified during data validation, the associated data have been qualified as unusable for decision making purposes.

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY - FORM B-7

ATTACHMENT 3

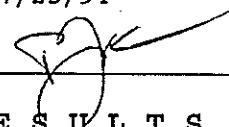
ANNOTATED LABORATORY REPORTS



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: H868
ARI Sample number: A
Client: Golder
Contact: Douglas Morell
Matrix: Soil
% Solids: 58.37

ID number: TP-7-A
Project: 923-1280
Description:
Sampled: 07/25/94
Received: 07/25/94

Released by: 

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	0.2 mg/kg-dry		0.2	SWC	GFA	08/05/94
7440-38-2	Arsenic	4.5 mg/kg-dry		0.9	SWN	GFA	08/06/94
7440-41-7	Beryllium	0.8 mg/kg-dry		0.2	SWC	ICP	07/28/94
7440-43-9	Cadmium	0.5 mg/kg-dry		0.3	SWC	ICP	07/28/94
7440-47-3	Chromium	34.5 mg/kg-dry		0.8	SWC	ICP	07/28/94
7440-50-8	Copper	43.7 mg/kg-dry		0.3	SWC	ICP	07/28/94
7439-92-1	Lead	50 mg/kg-dry		2	SWN	GFA	07/29/94
7439-97-6	Mercury	0.23 mg/kg-dry		0.07	SCM	CVA	07/27/97
7440-02-0	Nickel	26 mg/kg-dry		2	SWC	ICP	07/28/94
7782-49-2	Selenium	1.1 mg/kg-dry		0.3	SWN	GFA	08/06/94
7440-22-4	Silver	1.1 mg/kg-dry		0.5	SWC	ICP	07/28/94
7440-28-0	Thallium	0.8 mg/kg-dry	U	0.9	SWN	GFA	08/03/94
7440-66-6	Zinc	71.9 mg/kg-dry		0.6	SWC	ICP	07/28/94

7/29/94
J



ANALYTICAL
RESOURCES
INCORPORATED

ARI job number: H868
ARI Sample number: B
Client: Golder
Contact: Douglas Morell
Matrix: Soil

ID number: TP-7-B
Project: 923-1280
Description:
Sampled: 07/25/94
Received: 07/25/94

% Solids: 86.44

Released by:

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	0.2 mg/kg-dry		0.1	SWC	GFA	08/05/94
7440-38-2	Arsenic	1.6 mg/kg-dry		0.1	SWN	GFA	08/08/94
7440-41-7	Beryllium	0.2 mg/kg-dry		0.1	SWC	ICP	07/28/94
7440-43-9	Cadmium	0.2 mg/kg-dry	U	0.2	SWC	ICP	07/28/94
7440-47-3	Chromium	22.5 mg/kg-dry		0.5	SWC	ICP	07/28/94
7440-50-8	Copper	18.2 mg/kg-dry		0.2	SWC	ICP	07/28/94
7439-92-1	Lead	39 mg/kg-dry		1	SWN	GFA	07/29/94
7439-97-6	Mercury	0.25 mg/kg-dry		0.06	SCM	CVA	07/27/97
7440-02-0	Nickel	26 mg/kg-dry		1	SWC	ICP	07/28/94
7782-49-2	Selenium	0.2 mg/kg-dry		0.1	SWN	GFA	08/05/94
7440-22-4	Silver	0.5 mg/kg-dry		0.3	SWC	ICP	07/28/94
7440-28-0	Thallium	0.1 mg/kg-dry		0.1	SWN	GFA	08/01/94
7440-66-6	Zinc	91.2 mg/kg-dry		0.4	SWC	ICP	07/28/94

July 29, 1994

ATTACHMENT 4

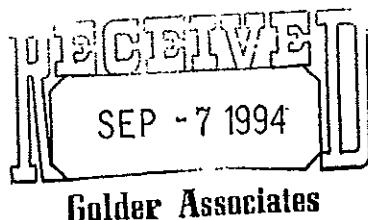
LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 1, 1994

Mr. Douglas Morell
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052



RE: Project No. 933-1280 (Norseland) / ARI Job No. H868

Dear Mr. Morell:

Please find enclosed the original Chain of Custody record (COC) and a set of analytical results for the above-referenced project. Analytical Resources, Inc. accepted two soil samples (TP-7-A and TP-7-B) and a VOA trip blank in good condition on July 25, 1994. No discrepancies were noted on the COC.

Samples were analyzed for volatile organic compounds by EPA method 8260, semivolatile organic compounds by EPA method 8270, total petroleum hydrocarbons by EPA method 418.1, pesticides/PCB Aroclors by EPA method 8081, and metals by EPA method 6010/7000. With the exception of the pesticide/PCBs, a copy of the data was supplied to you by facsimile on August 25, 1994. The pesticide/PCB results were supplied to you on August 31, 1994.

As we discussed by telephone on August 25, the laboratory encountered some delays with the pesticide results due to over scheduling. I apologize for any inconvenience you may have encountered due to these delays.

For the initial metals analysis, matrix spike and duplicate recoveries did not meet in-house control limits for lead. The laboratory performed a sample reanalysis which confirmed the initial QC run. Only the initial sample results have been included with this sample delivery group.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file H868

Sept 9 1994

BDA/dn

Chain of Custody Record & Laboratory Analysis Request



ANALYTICAL
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INCORPORATED

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date: July 25/1994

Page 1 of 1

ARI Client: Colder Associates Phone #: (606) 883-0777

Client Contact: Douglas Morell

Client Project ID: 923 - 1280 Neosland

Samplers: Douglas Morell

Sample ID	Date	Time	Matx	No Cont	Lab ID	Notes/Comments
1 TP-7-A (00)	7/25/94	10:30	Sof	6-714		
2 TP-7-A (903)	7/25/94	10:30	Sof	6-715		
3 TP-7-A (903)	7/25/94	10:36	Gril	6-715		
4 TP-7-B (00)	7/25/94	10:40	Siel	10-114		
5 TP-7-B (903)	7/25/94	10:40	Sof	10-114		
6 TP-7-B (903)	7/25/94	10:40	Sof	10-114		
7						
Comments/Special Instructions:	Relinquished by: (Signature) <u>Douglas Morell</u>			Relinquished by: (Signature) <u>Douglas Morell</u>	Relinquished by: (Signature) <u>Douglas Morell</u>	Relinquished by: (Signature) <u>Douglas Morell</u>
	Printed Name: <u>Douglas Morell</u>			Printed Name: <u>Douglas Morell</u>	Printed Name: <u>Douglas Morell</u>	Printed Name: <u>Douglas Morell</u>
	Company: <u>Colder Assoc</u>			Company: <u>Colder Assoc</u>	Company: <u>Colder Assoc</u>	Company: <u>Colder Assoc</u>
	Date: 7/25/94	Time: 1:45 pm		Date: Time:	Date: Time:	Date: Time:
	Received by: (Signature) <u>Chris Siberg</u>			Received by: (Signature) <u>Chris Siberg</u>	Received by: (Signature) <u>Chris Siberg</u>	Received by: (Signature) <u>Chris Siberg</u>
	Printed Name: <u>Chris Siberg</u>			Printed Name: <u>Chris Siberg</u>	Printed Name: <u>Chris Siberg</u>	Printed Name: <u>Chris Siberg</u>
	Company: ARI			Company: ARI	Company: ARI	Company: ARI
	Date: 7/25/94	Time: 1:45 pm		Date: Time:	Date: Time:	Date: Time:
	<u>923-1280</u>					

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.

ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

INORGANIC DATA ASSESSMENT SUMMARY

PROJECT: 933-1280	SITE: <i>Narseland</i>
LABORATORY: ART	SDG:
SAMPLES/MATRIX/ANALYSES: TP-7-A, TP-7-B /soil/ metals	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP	AA	HG	CYANIDE	OTHER
1. Data completeness	O	O			
2. Holding Times	O	O			
3. Calibration					
4. Blanks	O	O			
5. ICS	—	—			
6. LCS	—	—			
7. Duplicate RPD	O	O			
8. Spike Recovery	O	O			
9. HSA	—	—			
10. Other QC	—	—			
11. Field Duplicates	—	—			
12. Result Verification	—	—			
13. Overall Assessment	O	O			

O = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results: — not reported

Validated by: J. Schubert Date: 9/9/94
Reviewed by: Christina Y. Jure Date: 9/9/94

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

1. Data package completeness (check if present)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Case narrative | <input type="checkbox"/> Instrument Det. Limits |
| <input checked="" type="checkbox"/> Chain of custody | <input type="checkbox"/> ICP Correction Factors |
| <input checked="" type="checkbox"/> Sample Results | <input type="checkbox"/> ICP Linear Ranges |
| <input type="checkbox"/> ICV/CCV Results | <input type="checkbox"/> Preparation Logs |
| <input checked="" type="checkbox"/> Blank Results | <input type="checkbox"/> Analysis Run Logs |
| <input type="checkbox"/> ICP Interference Check Results | <input type="checkbox"/> ICP Raw Data |
| <input checked="" type="checkbox"/> Spike Recovery Results | <input type="checkbox"/> GFAA Raw Data |
| <input checked="" type="checkbox"/> Duplicate Results | <input type="checkbox"/> Hg Raw Data |
| <input type="checkbox"/> LCS Results | <input type="checkbox"/> Cyanide Raw Data |
| <input type="checkbox"/> Standard Addition Results | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> ICP Serial Dilution | |

Comments/Qualified Results: _____

2. Holding times (check all that apply)

- ICP/GFAA metals completed in <6 mos from collection
 Mercury analyzed in <28 days from collection
 Cyanide completed in 14 days from collection

Comments/Qualified Results: _____

3. Calibrations (check all that apply)

- ICV/CCV %R for ICP/AA, 90%-110%, results acceptable
 ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/U)
 ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
 ICV/CCV %R 80-120 for Hg, results acceptable
 ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/U)
 ICV/CCV %R for Hg, <65% or >135%, reject positive results (R)
 ICV/CCV %R 85-115 for Cyanide, results acceptable
 ICV/CCV %R 70-84% or 116-130%, results estimated (J/U)
 ICV/CCV %R <70% or >130%, reject positive results (R)

Comments/Qualified Results: No calibration data provided

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable	
Yes	No

4. Blanks (check all that apply)

- Detects reported in ICB/CCB, list: None
- Detects in preparation blanks, list:
- Detects in field blanks, list:

Qualify as undetected (U) all sample concentrations $\leq 5X$ any associated blank concentrations.

Comments/Qualified Results: _____

5. Interference Checks (check all that apply)

- ICS A/B Recoveries Acceptable
- Al, Ca, Fe, Mg sample concentrations > ICS concentrations
- ICS %R > 120%, results > IDL estimated (J)
- ICS %R 50-79%, results > IDL estimated (J)
- ICS %R 50-79%, results < IDL estimated (U/J)
- ICS %R < 50%, results > IDL and < IDL rejected (R/U/R)

Comments/Qualified Results: No interference check data provided

6. Laboratory Control Samples (check all that apply)

- LCS %R 80-120
- LCS %R 50-79% or > 120%, results > IDL estimated (J)
- LCS %R 50-79% and results < IDL estimated (U/J)
- LCS %R < 50% and all results rejected (R/U/R)

Comments/Qualified Results: No LCS data provided

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable		
Yes		No

7. Duplicate (check all that apply)

- Duplicate RPD ≤ 20% for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL
 Duplicate range is within \pm CRDL ($\pm 2 \times$ CRDL for soils) for results $< 5X$ CRDL

Comments/Qualified Results: _____

8. Spike Recovery (check all that apply)

- Spike %R with 75-125%
 Spike %R 30-74%, $> 125\%$, results $>$ IDL estimated (J)
 Spike %R 30-74% results $<$ IDL estimated (UJ)
 Spike %R $< 30\%$, results $<$ IDL rejected (UR)
 Field blank used for spike analysis

Comments/Qualified Results: Recovery of antimony and lead recovery ~~recovery~~ not within control limits

9. GFAA Performance

- Duplicate injection RSD $< 20\%$
 Duplicate injection RSD $> 20\%$, results $>$ CRDL estimated (J)
 Analytical spike %R 85-115%
 Analytical spike %R 40-85%, results $>$ IDL estimated (J)
 Analytical spike %R 10-40%, results $<$ IDL estimated (UJ)
 Analytical spike %R $< 10\%$, results $<$ IDL rejected (R)

Comments/Qualified Results: No GFAA data provided

INORGANIC DATA ASSESSMENT SUMMARY

Acceptable
Yes No

10. Other QC

Comments/Qualified Results: NA

11. Field Duplicates

Field duplicate RPD ≤ 20% (≤35% for soils)

Comments/Qualified Results: NA

12. Result Verification

All results supported in raw data

Comments/Qualified Results: No raw data provided.

13. Overall Assessment

Comments/Qualified Results: _____



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Matrix Spike Quality Control Report

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Client: Golder
Client's sample ID: TP-7-A
ARI sample ID: H868 ASPK
Units: mg/kg-dry

Analyte	Meth	Sample	Matrix Spike	Spike Added	%R	Control Limit	Q
Antimony	GFA	0.2	2.8	16.1	16.1	75-125%	
Arsenic	GFA	4.5	18.9	17.0	84.7	75-125%	
Beryllium	ICP	0.8	8.4	8.1	93.8	75-125%	
Cadmium	ICP	0.5	15.6	16.1	93.8	75-125%	
Chromium	ICP	34.5	72.3	40.3	93.8	75-125%	
Copper	ICP	43.7	60.7	16.1	105.6	75-125%	
Lead	GFA	50	102	34	152.9	75-125%	
Mercury	CVA	0.23	0.91	0.74	91.9	75-125%	
Nickel	ICP	26	103	81	95.1	75-125%	
Selenium	GFA	1.1	15.0	17.0	81.8	75-125%	
Silver	ICP	1.1	40.9	40.3	98.8	75-125%	
Thallium	GFA	0	17.2	17.0	101.2	75-125%	
Zinc	ICP	71.9	141	81	85.3	75-125%	

%R = Percent Recovery

'Q' codes: 'N' = control limit not met
'H' = %R not applicable, sample concentration too high
'S' = Analyte not spiked

8/19/94
9

**PURGE WATER AND DRILL CUTTINGS
ANALYTICAL DATA**

33C



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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

May 19, 1994

RECEIVED

MAY 23 1994

Golder Associates

Mr. Gregory C. Moon
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RE: Project No. 933-1280 (Norseland/Bremerton) / ARI Job No. H113

Dear Mr. Moon:

Please find enclosed original reports for the above-referenced project. Analytical Resources, Incorporated (ARI) accepted one water sample (MW-3) from on May 4, 1994.

We received the sample intact with no discrepancies on the chain-of-custody. As requested, the sample was analyzed for selected general chemistry parameters including chrome VI. Sample analysis was routine and no problems were encountered.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file H113

BDA/dn



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Final Report
Laboratory Analysis of Conventional Parameters

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Lab Sample ID: H113A QC Report No: H113-Golder Associates
LIMS ID: 94-6826 Project: Norseland/Bremerton
Matrix: Water 933-1280
Data Release Authorized: MWB Date Sampled: 05/03/94
Reported: 05/19/94 GMM Date Received: 05/04/94

Analyte	Analysis Date	Method	RL	Units	Result
pH	05/04/94	EPA 150.1	0.00	std units	6.47
Alkalinity	05/09/94	EPA 310.1	1.0	mg/L CaCO ₃	48.1
Hexavalent Chrome	05/04/94	EPA 7196	0.010	mg/L	< 0.01 U
Conductivity	05/05/94	EPA 120.1	1.00	µS	97.7
Total Dissolved Solids	05/06/94	EPA 160.1	10.0	mg/L	92.0
Turbidity	05/04/94	EPA 180.1	0.05	NTU	3.00
Bromide	05/11/94	EPA 320.1	0.100	mg/L	< 0.1 U
Fluoride	05/05/94	EPA 340.2	0.10	mg/L	< 0.1 U
Chloride	05/05/94	EPA 325.2	1.0	mg/L	1.6
Nitrate + Nitrite (NO ₂ +NO ₃)	05/04/94	EPA 353.2	0.010	mg-N/L	0.299
Total Phosphorous	05/05/94	EPA 365.2	0.016	mg-P/L	0.019
Ortho-Phosphorous	05/05/94	EPA 365.2	0.004	mg-P/L	0.015
Sulfate	05/09/94	EPA 375.2	2.5	mg/L	< 2.5 U

RL Analytical reporting limit

U Undetected at reported detection limit



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QA Report - Method Blank Analysis

Matrix: Water

QC Report No: H113-Golder Associates

Project: Norseland/Bremerton

933-1280

Date Received: 05/04/94

Data Release Authorized: *MWJ* *5/04/94*

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

METHOD BLANK RESULTS
CONVENTIONALS

<u>Analysis Date</u>	<u>Constituent</u>	<u>Units</u>	<u>Result</u>	
05/09/94	Alkalinity	mg/L CaCO ₃	< 1	U
05/04/94	Hexavalent Chrome	mg/L	< 0.01	U
05/05/94	Conductivity	uS	< 1	U
05/06/94	Total Dissolved Solids	mg/L	< 10	U
05/04/94	Turbidity	NTU	< 0.05	U
05/11/94	Bromide	mg/L	< 0.1	U
05/05/94	Fluoride	mg/L	< 0.1	U
05/05/94	Chloride	mg/L	< 1	U
05/04/94	Nitrate + Nitrite (NO ₂ +NO ₃)	mg-N/L	< 0.01	U
05/05/94	Total Phosphorus	mg-P/L	< 0.016	U
05/05/94	Ortho-Phosphorous	mg-P/L	< 0.004	U
05/09/94	Sulfate	mg/L	< 2.5	U



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QA Report - Check Standard Analysis

QC Report No: H113-Golder Associates
Matrix: Water Project: Norseland/Bremerton
933-1280
Date Received: 05/04/94

Data Release Authorized: *MAP*
5-15-94

CHECK STANDARD ANALYSIS
CONVENTIONALS

Constituent	Units	Measured Value	True Value	Recovery
Check Standard Alkalinity, total (CaCO ₃)	mg/L CaCO ₃	238.	236.	101%
Date analyzed: 05/09/94				
Check Standard Conductance	uS	1,420	1,410	100%
Date analyzed: 05/05/94				
Check Standard Turbidity	NTU	1.48	1.53	96.7%
Date analyzed: 05/04/94				
Check Standard Bromide	mg/L	0.410	0.400	102%
Date analyzed: 05/11/94				
Check Standard Fluoride	mg/L	1.96	1.97	99.5%
Date analyzed: 05/05/94				
Check Standard Phosphate, total	mg-P/L	0.086	0.080	108%
Date analyzed: 05/05/94				
Check Standard Phosphorous, Sol Reactive	mg-P/L	0.038	0.040	95.0%
Date analyzed: 05/05/94				



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(206) 621-6490
(206) 621-7523 (FAX)

QA Report - Standard Reference Material Analysis

Matrix: Water QC Report No: H113-Golder Associates
 Project: Norseland/Bremerton
 933-1280
Data Release Authorized: *MAD* Date Received: 05/04/94
6/14/94

STANDARD REFERENCE MATERIAL ANALYSIS
CONVENTIONALS

<u>Constituent</u>	<u>Units</u>	<u>Value</u>	<u>Certified Value</u>	<u>Recovery</u>
pH Calibration Standard				
pH	std units	7.01	7.00	100%
Date analyzed: 05/04/94				
High Pur.Std. Lot#390723				
Hexavalent Chrome	mg/L	0.270	0.250	108%
Date analyzed: 05/04/94				
SPEX QC Lot#5-143AS				
Fluoride	mg/L	2.16	2.00	108%
Date analyzed: 05/05/94				
SPEX QC Lot#6-103AS				
Chloride	mg/L	24.2	25.0	96.8%
Date analyzed: 05/05/94				
SPEX QC Lot#5-237AS				
Nitrate + Nitrite as N	mg-N/L	0.463	0.452	102%
Date analyzed: 05/04/94				
SPEX QC Lot#5-231AS				
Phosphate, total	mg-P/L	0.083	0.100	83.0%
Date analyzed: 05/05/94				
SPEX QC Lot#6-102AS				
Sulfate (SO ₄)	mg/L	26.5	25.0	106%
Date analyzed: 05/09/94				



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QA Report - Replicate Analysis

Matrix: Water

QC Report No: H113-Golder Associates

Project: Norseland/Bremerton

933-1280

Date Received: 05/04/94

Data Release Authorized: MW

5/11/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

DUPPLICATE ANALYSIS RESULTS
CONVENTIONALS

Constituent	Units	Sample Value	Duplicate Value	RPD
-------------	-------	--------------	-----------------	-----

Sample ID: MW-3

pH	std units	6.47	6.52	0.8%
Alkalinity, total (CaCO ₃)	mg/L CaCO ₃	48.1	47.3	1.7%
Hexavalent Chrome	mg/L	< 0.010 U	< 0.010 U	NA
Total Dissolved Solids	mg/L	92.0	97.7	6.0%
Turbidity	NTU	3.00	2.90	3.4%
Bromide	mg/L	< 0.100 U	< 0.100 U	NA
Fluoride	mg/L	< 0.10 U	< 0.10 U	NA
Nitrate + Nitrite as N	mg-N/L	0.299	0.292	2.4%
Phosphate, total	mg-P/L	0.019	0.019	0.0%
Phosphorous, Sol Reactive	mg-P/L	0.015	0.015	0.0%
Sulfate (SO ₄)	mg/L	< 2.5 U	< 2.5 U	NA



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QA Report - Matrix Spike Analysis

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Matrix: Water QC Report No: H113-Golder Associates
 Project: Norseland/Bremerton
 933-1280
 Date Received: 05/04/94

Data Release Authorized: *MAB*
5/19/94

MATRIX SPIKE QA/QC REPORT
CONVENTIONALS

Constituent	Units	Sample Value	Spike Value	Spike Added	Recovery
Sample ID: MW-3					
Hexavalent Chrome	mg/L	< 0.010	0.280	0.240	117%
Bromide	mg/L	< 0.100	0.214	0.200	107%
Fluoride	mg/L	< 0.10	0.24	0.20	120%
Nitrate + Nitrite as N	mg-N/L	0.299	0.676	0.400	94.2%
Phosphate, total	mg-P/L	0.019	0.227	0.200	104%
Phosphorous, Sol Reactive	mg-P/L	0.015	0.118	0.100	103%
Sulfate (SO ₄)	mg/L	< 2.5	26.7	25.0	107%

Cooler Temp: 20C.

15

CHAIN OF CUSTODY RECORD

33



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333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

RECEIVED
MAY 25 1994

Golder Associates

May 24, 1994

Mr. Gregory C. Moon
Golder Associates
4104 148th Avenue NE
Redmond, WA 98052

RE: Project No. 933-1280 (Norseland/Bremerton) / ARI Job No. H117

Dear Mr. Moon:

Please find enclosed original reports for the above-referenced project. Analytical Resources, Incorporated (ARI) accepted one water sample (MW-3) and one soil sample (CUT-1) on May 4, 1994.

We received the sample intact with no discrepancies on the chain-of-custody. Sample analysis for the requested parameters proceeded without incident.

As always, a copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. If I am unavailable, you can leave a message on my voice mail and I will return your call as soon as possible.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Manager
(206)340-2866, ext. 116

enclosures
cc: file H117

BDA/dn

EXPLANATION OF INORGANIC DATA REPORT CODES

33C

The columns labeled 'PREP', 'C', and 'M' contain important information about your analyses. The codes are defined below.

PREPARATION CODES

These 3-letter codes describe methods used to prepare samples for analysis:

AEN USEPA, Metals in air filters
AHM ARI, Mercury in air filters
AHN ARI, Metals in air filters
ANN NIOSH 7300, Metals in air filters
CAN AOAC (1984) 25.024, Metals in earthenware
DE6 EPA 600/4-79-020 218.5, Cr(VI) in water
DMM DMN followed by TMM, Dissolved mercury
DMN Filtered through .45u filter, Dissolved metals
EW6 EWN followed by DE6
EWM EWN followed by TMM
EWN USEPA SW-846 1310, EP Toxicity
FHP ARI, Metals in tissue (HNO₃/HClO₄)
FPP PSEP, Metals in tissue (HNO₃/HClO₄)
FRM Journal, Mercury in tissue
FRN Journal, Metals in tissue (HNO₃/H₂O₂)
KRN ARI, Concentration by coprecipitation
LEM USEPA, TCLP followed by TMM
LEN USEPA, TCLP Extraction
MHM ARI, Mercury in miscellaneous materials
MHN ARI, Metals in miscellaneous materials
OAM ARI, Mercury in oil, grease or tar
OAN ARI, Metals in oil, grease or tar
PHM ARI, Mercury in wipes
PHN ARI, Metals in wipes
RCC USEPA CLP, Water digestion, HCl matrix
RCN USEPA CLP, Water digestion, HNO₃ matrix
REC EPA 600/4-79-020 4.1.4, HCl matrix
REI EPA 600/4-79-020 200.7 and 9.4
REN EPA 600/4-79-020 4.1.4, HNO₃ matrix

RMA EPA 600/4-79-020 206.2
RWC USEPA SW-846 3005
SCC USEPA CLP, Soil digestion, HCl matrix
SCM USEPA CLP, Mercury in soil
SCN USEPA CLP, Soil digestion, HNO₃ matrix
SEM EPA 600/4-79-020 245.5, Mercury in soil
SHF ARI, Metals in soil, HF digestion
SMN Agronomy, Metals in soil, Water extract
SMM SMN followed by DMM, Dissolved mercury
SSC Standard Methods 302C, Sb/Sn in soil
SSN Standard Methods 302C, Soil digestion
SSS Standard Methods 302C, Ti in soil
SW6 USEPA SW-846 3060, Cr(VI) in soil
SWC USEPA SW-846 3050, HCl matrix
SWN USEPA SW-846 3050, HNO₃ matrix
SZF PSEP/PSDDA, Microwave, Total acid digestion
TEC EPA 600/4-79-020 4.1.3, HCl matrix
TEG EPA 600/4-79-020 272.1, Silver in water
TEI EPA 600/4-79-020 200.7 and 9.3
TEN EPA 600/4-79-020 4.1.3, HNO₃ matrix
THG ARI, Silver in photographic solutions
TMM EPA 600/4-79-020 245.1, Mercury in water
TSC Standard Methods 302C, Sb/Sn in water
TSN Standard Methods 302D
TSS Standard Methods 302E, Ti in water
TWC USEPA SW-846 3010, HCl matrix
TWG USEPA SW-846 7760, Silver in water
TWN USEPA SW-846 3020, HNO₃ matrix
WMN EPA 600/4-79-020, Preserved, undigested water

CONCENTRATION CODES

These codes are used to qualify reported concentrations:

U No analyte was detected. The reported value is the lower limit of detection.

METHOD CODES

These codes signify the instrumental technique used for analysis:

CVA Cold Vapor Atomic Absorption Spectrophotometry
FLA Flame Atomic Absorption Spectrophotometry
GFA Graphite Furnace Atomic Absorption Spectrophotometry
ICP Inductively Coupled Plasma Atomic Emission Spectrometry

33C



ANALYTICAL
RESOURCES
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ARI job number: H117
 ARI Sample number: A
 Client: Golder
 Contact: Greg Moon
 Matrix: Water
 % Solids: 0.00

ID number: MW-3
 Project: 933-1280
 Description:
 Sampled: 05/03/94
 Received: 05/04/94

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Released by: JFK

A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	0.010 mg/L		0.001	RWC	GFA	05/10/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RMA	GFA	05/09/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	TWN	ICP	05/12/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	TWN	ICP	05/12/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	TWN	ICP	05/12/94
7440-50-8	Copper	0.002 mg/L	U	0.002	TWN	ICP	05/12/94
7439-92-1	Lead	0.001 mg/L	U	0.001	TWN	GFA	05/10/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	05/10/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	TWN	ICP	05/12/94
7782-49-2	Selenium	0.001 mg/L	U	0.001	RMA	GFA	05/16/94
7440-22-4	Silver	0.003 mg/L	U	0.003	TWN	ICP	05/12/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	TWN	GFA	05/11/94
7440-66-6	Zinc	0.008 mg/L		0.004	TWN	ICP	05/12/94



ANALYTICAL
RESOURCES
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ARI job number: H117
ARI Sample number: B
Client: Golder
Contact: Greg Moon
Matrix: Soil
% Solids: 86.97

ID number: CUT-1
Project: 933-1280
Description:
Sampled: 05/03/94
Received: 05/04/94

Released by: *[Signature]*

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	6 mg/kg-dry	U	6	SWC	ICP	05/10/94
7440-38-2	Arsenic	6 mg/kg-dry	U	6	SWC	ICP	05/10/94
7440-41-7	Beryllium	0.3 mg/kg-dry		0.1	SWC	ICP	05/10/94
7440-43-9	Cadmium	0.2 mg/kg-dry	U	0.2	SWC	ICP	05/10/94
7440-47-3	Chromium	38.3 mg/kg-dry		0.6	SWC	ICP	05/10/94
7440-50-8	Copper	19.9 mg/kg-dry		0.2	SWC	ICP	05/10/94
7439-92-1	Lead	5 mg/kg-dry		2	SWC	ICP	05/10/94
7439-97-6	Mercury	0.05 mg/kg-dry	U	0.05	SCM	CVA	05/12/94
7440-02-0	Nickel	39 mg/kg-dry		1	SWC	ICP	05/10/94
7782-49-2	Selenium	9 mg/kg-dry		6	SWC	ICP	05/10/94
7440-22-4	Silver	0.3 mg/kg-dry	U	0.3	SWC	ICP	05/10/94
7440-28-0	Thallium	6 mg/kg-dry	U	6	SWC	ICP	05/10/94
7440-66-6	Zinc	37.8 mg/kg-dry		0.4	SWC	ICP	05/10/94



ANALYTICAL
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ARI job number: H117
ARI Sample number: MB1
Client: Golder
Contact: Greg Moon
Matrix: Water
% Solids: 100.0

ID number:
Project: 933-1280
Description: Method Blank
Sampled: / /
Received: / /

Released by: JL

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	0.001 mg/L	U	0.001	RWC	GFA	05/10/94
7440-38-2	Arsenic	0.001 mg/L	U	0.001	RMA	GFA	05/09/94
7440-41-7	Beryllium	0.001 mg/L	U	0.001	TWN	ICP	05/12/94
7440-43-9	Cadmium	0.002 mg/L	U	0.002	TWN	ICP	05/12/94
7440-47-3	Chromium	0.005 mg/L	U	0.005	TWN	ICP	05/12/94
7440-50-8	Copper	0.002 mg/L	U	0.002	TWN	ICP	05/12/94
7439-92-1	Lead	0.001 mg/L	U	0.001	TWN	GFA	05/10/94
7439-97-6	Mercury	0.0001 mg/L	U	0.0001	TMM	CVA	05/10/94
7440-02-0	Nickel	0.01 mg/L	U	0.01	TWN	ICP	05/12/94
7782-49-2	Selenium	0.001 mg/L	U	0.001	RMA	GFA	05/16/94
7440-22-4	Silver	0.003 mg/L	U	0.003	TWN	ICP	05/12/94
7440-28-0	Thallium	0.001 mg/L	U	0.001	TWN	GFA	05/11/94
7440-66-6	Zinc	0.004 mg/L	U	0.004	TWN	ICP	05/12/94



ANALYTICAL
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ARI job number: H117
ARI Sample number: MB2
Client: Golder
Contact: Greg Moon
Matrix: Soil

% Solids: 100.0

ID number:
Project: 933-1280
Description: Method Blank
Sampled: / /
Received: / /

Released by: JK

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	5 mg/kg-dry	U	5	SWC	ICP	05/10/94
7440-38-2	Arsenic	5 mg/kg-dry	U	5	SWC	ICP	05/10/94
7440-41-7	Beryllium	0.1 mg/kg-dry	U	0.1	SWC	ICP	05/10/94
7440-43-9	Cadmium	0.2 mg/kg-dry	U	0.2	SWC	ICP	05/10/94
7440-47-3	Chromium	0.5 mg/kg-dry	U	0.5	SWC	ICP	05/10/94
7440-50-8	Copper	0.2 mg/kg-dry	U	0.2	SWC	ICP	05/10/94
7439-92-1	Lead	2 mg/kg-dry	U	2	SWC	ICP	05/10/94
7439-97-6	Mercury	0.05 mg/kg-dry	U	0.05	SCM	CVA	05/12/94
7440-02-0	Nickel	1 mg/kg-dry	U	1	SWC	ICP	05/10/94
7782-49-2	Selenium	5 mg/kg-dry	U	5	SWC	ICP	05/10/94
7440-22-4	Silver	0.3 mg/kg-dry	U	0.3	SWC	ICP	05/10/94
7440-28-0	Thallium	5 mg/kg-dry	U	5	SWC	ICP	05/10/94
7440-66-6	Zinc	0.4 mg/kg-dry	U	0.4	SWC	ICP	05/10/94



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ARI job number: H117
ARI Sample number: MBSPK
Client: Golder
Contact: Greg Moon
Matrix: Water
% Solids: 100.0

ID number:
Project: 933-1280
Description: Method Blank Spike
Sampled: / /
Received: / /
Released by: [Signature]

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A N A L Y T I C A L R E S U L T S

CAS Number	Analyte	Concentration	C	LOD	Prep	M	Analyzed
7440-36-0	Antimony	0.099 mg/L		0.005	RWC	GFA	05/10/94
7440-38-2	Arsenic	0.091 mg/L		0.005	RMA	GFA	05/09/94
7440-41-7	Beryllium	0.044 mg/L		0.001	TWN	ICP	05/12/94
7440-43-9	Cadmium	0.127 mg/L		0.002	TWN	ICP	05/12/94
7440-47-3	Chromium	0.247 mg/L		0.005	TWN	ICP	05/12/94
7440-50-8	Copper	0.097 mg/L		0.002	TWN	ICP	05/12/94
7439-92-1	Lead	0.083 mg/L		0.005	TWN	GFA	05/10/94
7439-97-6	Mercury	0.0009 mg/L		0.0001	TMM	CVA	05/10/94
7440-02-0	Nickel	0.49 mg/L		0.01	TWN	ICP	05/12/94
7782-49-2	Selenium	0.087 mg/L		0.005	RMA	GFA	05/16/94
7440-22-4	Silver	0.272 mg/L		0.003	TWN	ICP	05/12/94
7440-28-0	Thallium	0.101 mg/L		0.005	TWN	GFA	05/11/94
7440-66-6	Zinc	0.495 mg/L		0.004	TWN	ICP	05/12/94



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Matrix Spike Quality Control Report

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Client: Golder
Client's sample ID: Method Blank Spike
ARI sample ID: H117 MBSPK
Units: mg/L

333 Ninth Ave. North
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Analyte	Meth	Sample	Matrix Spike	Spike Added	%R	Control Limit	Q
Antimony	GFA	0	0.099	0.100	99.0	75-125%	
Arsenic	GFA	0	0.091	0.100	91.0	75-125%	
Beryllium	ICP	0	0.044	0.050	88.0	75-125%	
Cadmium	ICP	0	0.127	0.120	105.8	75-125%	
Chromium	ICP	0	0.247	0.250	98.8	75-125%	
Copper	ICP	0	0.097	0.100	97.0	75-125%	
Lead	GFA	0	0.083	0.100	83.0	75-125%	
Mercury	CVA	0	0.0009	0.0010	90.0	75-125%	
Nickel	ICP	0	0.49	0.50	98.0	75-125%	
Selenium	GFA	0	0.087	0.100	87.0	75-125%	
Silver	ICP	0	0.272	0.270	100.7	75-125%	
Thallium	GFA	0	0.101	0.100	101.0	75-125%	
Zinc	ICP	0	0.495	0.500	99.0	75-125%	

%R = Percent recovery

'Q' codes: 'N' = control limit not met

'H' = %R not valid, sample concentration too high



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Final Report
Laboratory Analysis of Conventional Parameters

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Lab Sample ID: H117A QC Report No: H117-Golder Associates
LIMS ID: 94-6836 Project: Norseland/Bremerton
Matrix: Water 933-1280
Data Release Authorized: *MWf* Date Sampled: 05/03/94
Reported: 05/19/94 *5.19.94* Date Received: 05/04/94

Analyte	Analysis Date	Method	RL	Units	Result
Total Cyanide	05/12/94	EPA 335.2	0.004	mg/L	< 0.004 U
N-Ammonia	05/10/94	EPA 350.1	0.010	mg-N/L	< 0.01 U

RL Analytical reporting limit

U Undetected at reported detection limit



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QA Report - Method Blank Analysis

Matrix: Water

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280

Date Received: 05/04/94

Data Release Authorized: *MAP*
5/19/94

333 Ninth Ave. North
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METHOD BLANK RESULTS
CONVENTIONALS

<u>Analysis Date</u>	<u>Constituent</u>	<u>Units</u>	<u>Result</u>	
05/12/94	Total Cyanide	mg/L	< 0.004	U
05/10/94	N-Ammonia	mg-N/L	< 0.01	U



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QA Report - Check Standard Analysis

Matrix: Water QC Report No: H117-Golder Associates
 Project: Norseland/Bremerton
 933-1280
 Date Received: 05/04/94

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Data Release Authorized: *MWP*
5/19/94

CHECK STANDARD ANALYSIS
CONVENTIONALS

<u>Constituent</u>	<u>Units</u>	<u>Measured Value</u>	<u>True Value</u>	<u>Recovery</u>
Check Standard Cyanide Date analyzed: 05/12/94	mg/L	0.165	0.186	88.7%



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QA Report - Standard Reference Material Analysis

Matrix: Water QC Report No: H117-Golder Associates
 Project: Norseland/Bremerton
 933-1280
Data Release Authorized: *MOP* Date Received: 05/04/94
 5-19-94

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STANDARD REFERENCE MATERIAL ANALYSIS
CONVENTIONALS

<u>Constituent</u>	<u>Units</u>	<u>Value</u>	<u>Certified Value</u>	<u>Recovery</u>
--------------------	--------------	--------------	------------------------	-----------------

SPEX QC Lot#6-154AS
Ammonia as N mg-N/L 0.790 0.824 95.9%
Date analyzed: 05/10/94



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QA Report - Replicate Analysis

Matrix: Water

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280

Date Received: 05/04/94

Data Release Authorized: MWJ
5/19/94

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DUPLICATE ANALYSIS RESULTS
CONVENTIONALS

Constituent	Units	Sample Value	Duplicate Value	RPD
Cyanide	mg/L	< 0.004 U	< 0.004 U	NA
Ammonia as N	mg-N/L	< 0.010 U	< 0.010 U	NA

Sample ID: MW-3

Cyanide mg/L < 0.004 U < 0.004 U NA
Ammonia as N mg-N/L < 0.010 U < 0.010 U NA



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QA Report - Matrix Spike Analysis

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Matrix: Water QC Report No: H117-Golder Associates
 Project: Norseland/Bremerton
 933-1280
Data Release Authorized: MWJ Date Received: 05/04/94

MATRIX SPIKE QA/QC REPORT
CONVENTIONALS

Constituent	Units	Sample Value	Spike Value	Spike Added	Recovery
Sample ID: MW-3					
Cyanide	mg/L	< 0.004	0.132	0.149	88.6%
Ammonia as N	mg-N/L	< 0.010	0.333	0.400	83.2%



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ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: MW-3

Lab Sample ID: H117A
LIMS ID: 94-6836
Matrix: Water

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

Data Release Authorized:
Reported: 05/20/94

Date extracted: 05/05/94
Date analyzed: 05/11/94

Sample Amount: 1000 mL
Final Extract Volume: 10 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor Epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
7421-36-3	Endrin Aldehyde	0.10 U
57-74-9	gamma Chlordane	0.050 U
5103-71-9	alpha Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
	Aroclor 1016/1242	1.0 U
53469-21-9	Aroclor 1242	1.0 U
12672-29-6	Aroclor 1248	1.0 U
11097-69-1	Aroclor 1254	1.0 U
11096-82-5	Aroclor 1260	1.0 U
11141-16-5	Aroclor 1232	1.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 64.9%
Tetrachlorometaxylene 62.8%



ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: CUT-1

Analytical
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Consultants

Lab Sample ID: H117B
LIMS ID: 94-6837
Matrix: Soil

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

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(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 05/20/94

Date extracted: 05/11/94
Date analyzed: 05/17/94

Sample Amount: 26.7 g-dry-wt
Final Extract Volume: 20 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	alpha-BHC	3.7 U
319-85-7	beta-BHC	3.7 U
319-86-8	delta-BHC	3.7 U
58-89-9	gamma-BHC (Lindane)	3.7 U
76-44-8	Heptachlor	3.7 U
309-00-2	Aldrin	3.7 U
1024-57-3	Heptachlor Epoxide	3.7 U
959-98-8	Endosulfan I	3.7 U
60-57-1	Dieldrin	7.5 U
72-55-9	4,4'-DDE	7.5 U
72-20-8	Endrin	7.5 U
33213-65-9	Endosulfan II	7.5 U
72-54-8	4,4'-DDD	7.5 U
1031-07-8	Endosulfan Sulfate	7.5 U
50-29-3	4,4'-DDT	7.5 U
72-43-5	Methoxychlor	37 U
53494-70-5	Endrin Ketone	7.5 U
7421-36-3	Endrin Aldehyde	7.5 U
57-74-9	gamma Chlordane	3.7 U
5103-71-9	alpha Chlordane	3.7 U
8001-35-2	Toxaphene	370 U
	Aroclor 1016/1242	75 U
53469-21-9	Aroclor 1242	75 U
12672-29-6	Aroclor 1248	75 U
11097-69-1	Aroclor 1254	75 U
11096-82-5	Aroclor 1260	75 U
11141-16-5	Aroclor 1232	75 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 67.8%
Tetrachlorometaxylen 58.2%



ANALYTICAL
RESOURCES
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ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: Method Blank

Analytical
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Lab Sample ID: H117MB

QC Report No: H117-Golder Associates

LIMS ID: 94-6836

Project: Norseland/Bremerton

Matrix: Water

933-1280

Date Sampled: NA

Date Received: NA

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:

Reported: 05/20/94

Date extracted: 05/05/94

Sample Amount: 1000 mL

Date analyzed: 05/11/94

Final Extract Volume: 10 ml

Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	a-BHC	0.050 U
319-85-7	b-BHC	0.050 U
319-86-8	d-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor Epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
534947-70-5	Endrin Ketone	0.10 U
7421-36-3	Endrin Aldehyde	0.10 U
57-74-9	gamma Chlordane	0.050 U
5103-71-9	alpha Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
	Aroclor 1016/1242	1.0 U
53469-21-9	Aroclor 1242	1.0 U
12672-29-6	Aroclor 1248	1.0 U
11097-69-1	Aroclor 1254	1.0 U
11096-82-5	Aroclor 1260	1.0 U
11141-16-5	Aroclor 1232	1.0 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 80.2%
Tetrachlorometaxylene 49.1%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD

Sample No: Method Blank

Lab Sample ID: H117MB
LIMS ID: 94-6837
Matrix: Soil

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: NA
Date Received: NA

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 05/20/94

Date extracted: 05/11/94
Date analyzed: 05/17/94

Sample Amount: 30.0 g-dry-wt
Final Extract Volume: 20 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
319-84-6	a-BHC	3.3 U
319-85-7	b-BHC	3.3 U
319-86-8	d-BHC	3.3 U
58-89-9	gamma-BHC (Lindane)	3.3 U
76-44-8	Heptachlor	3.3 U
309-00-2	Aldrin	3.3 U
1024-57-3	Heptachlor Epoxide	3.3 U
959-98-8	Endosulfan I	3.3 U
60-57-1	Dieldrin	6.7 U
72-55-9	4,4'-DDE	6.7 U
72-20-8	Endrin	6.7 U
33213-65-9	Endosulfan II	6.7 U
72-54-8	4,4'-DDD	6.7 U
1031-07-8	Endosulfan Sulfate	6.7 U
50-29-3	4,4'-DDT	6.7 U
72-43-5	Methoxychlor	33 U
534947-70-5	Endrin Ketone	6.7 U
7421-36-3	Endrin Aldehyde	6.7 U
57-74-9	gamma Chlordane	3.3 U
5103-71-9	alpha Chlordane	3.3 U
8001-35-2	Toxaphene	330 U
	Aroclor 1016/1242	67 U
53469-21-9	Aroclor 1242	67 U
12672-29-6	Aroclor 1248	67 U
11097-69-1	Aroclor 1254	67 U
11096-82-5	Aroclor 1260	67 U
11141-16-5	Aroclor 1232	67 U

Pesticide Surrogate Recovery

Decachlorobiphenyl 67.1%
Tetrachloromethylene 59.7%



ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

ORGANICS ANALYSIS DATA SHEET
Pesticide/PCB by GC/ECD

Lab Sample ID: H117SB
LIMS ID: 94-6836
Matrix: Water

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized:
Reported: 05/20/94

Cathleen M. Newman

BLANK SPIKE RECOVERY CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY
gamma-BHC (Lindane)	0.374	0.500	74.8%
Heptachlor	0.273	0.500	54.6%
Aldrin	0.219	0.500	43.8%
Dieldrin	0.768	1.00	76.8%
Endrin	0.779	1.00	77.9%
4,4'-DDT	0.780	1.00	78.0%

Spike Blank Surrogate Recovery

Decachlorobiphenyl	83.4%
Tetrachlorometaxylene	56.7%

Values reported in ug/L



ANALYTICAL
RESOURCES
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Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET
Pesticide/PCB by GC/ECD

Lab Sample ID: H117SB
LIMS ID: 94-6837
Matrix: Soil

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280

Data Release Authorized:
Reported: 05/20/94

BLANK SPIKE RECOVERY CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY
gamma-BHC (Lindane)	21.5	33.3	64.5%
Heptachlor	23.5	33.3	70.5%
Aldrin	20.6	33.3	61.8%
Dieldrin	37.5	66.7	56.2%
Endrin	42.1	66.7	63.2%
4,4'-DDT	41.0	66.7	61.5%

Spike Blank Surrogate Recovery

Decachlorobiphenyl	71.3%
Tetrachloromethylene	63.3%

Values reported in ug/kg



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 1 of 2

Sample No: MW-3

Analytical
Chemists &
Consultants

Lab Sample ID: H117A
LIMS ID: 94-6836
Matrix: Water
Data Release Authorized: *MMF*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/05/94
Date analyzed: 05/12/94
Instrument: FINN2

Sample Amount: 1000 ml
Final Extract Volume: 1.0 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	2.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
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Sample No: MW-3

Analytical
Chemists &
Consultants

Lab Sample ID: H117A
LIMS ID: 94-6836
Matrix: Water
Data Release Authorized: *MH*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/05/94
Date analyzed: 05/12/94
Instrument: FINN2

Sample Amount: 1000 ml
Final Extract Volume: 1.0 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0 U
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.0 U
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	106%	d5-Phenol	35.3%
2-Fluorobiphenyl	92.3%	2-Fluorophenol	47.5%
d14-p-Terphenyl	85.3%	2,4,6-Tribromophenol	85.3%
d4-1,2-Dichlorobenzene	76.3%	d4-2-Chlorophenol	84.9%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
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Sample No: CUT-1

Analytical
Chemists &
Consultants

Lab Sample ID: H117B
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *DBP*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/11/94
Date analyzed: 05/13/94
Instrument: FINN2
GPC Cleanup: NO

Sample Amount: 26.7 g dry Wt
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: 11.7%
pH: 6.8

CAS Number	Analyte	ug/kg
108-95-2	Phenol	150 U
111-44-4	Bis-(2-Chloroethyl) Ether	75 U
95-57-8	2-Chlorophenol	75 U
541-73-1	1,3-Dichlorobenzene	75 U
106-46-7	1,4-Dichlorobenzene	75 U
100-51-6	Benzyl Alcohol	380 U
95-50-1	1,2-Dichlorobenzene	75 U
95-48-7	2-Methylphenol	75 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	75 U
106-44-5	4-Methylphenol	75 U
621-64-7	N-Nitroso-Di-N-Propylamine	75 U
67-72-1	Hexachloroethane	150 U
98-95-3	Nitrobenzene	75 U
78-59-1	Isophorone	75 U
88-75-5	2-Nitrophenol	380 U
105-67-9	2,4-Dimethylphenol	150 U
65-85-0	Benzoic Acid	750 U
111-91-1	bis(2-Chloroethoxy) Methane	75 U
120-83-2	2,4-Dichlorophenol	230 U
120-82-1	1,2,4-Trichlorobenzene	75 U
91-20-3	Naphthalene	75 U
106-47-8	4-Chloroaniline	230 U
87-68-3	Hexachlorobutadiene	150 U
59-50-7	4-Chloro-3-methylphenol	150 U
91-57-6	2-Methylnaphthalene	75 U
77-47-4	Hexachlorocyclopentadiene	380 U
88-06-2	2,4,6-Trichlorophenol	380 U
95-95-4	2,4,5-Trichlorophenol	380 U
91-58-7	2-Chloronaphthalene	75 U
88-74-4	2-Nitroaniline	380 U
131-11-3	Dimethylphthalate	75 U
208-96-8	Acenaphthylene	75 U
99-09-2	3-Nitroaniline	380 U
83-32-9	Acenaphthene	75 U
51-28-5	2,4-Dinitrophenol	750 U



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
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Sample No: CUT-1

Analytical
Chemists &
Consultants

Lab Sample ID: H117B
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *OK*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/11/94
Date analyzed: 05/13/94
Instrument: FINN2
GPC Cleanup: NO

Sample Amount: 26.7 g dry Wt
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: 11.7%
pH: 6.8

CAS Number	Analyte	ug/kg
100-02-7	4-Nitrophenol	380 U
132-64-9	Dibenzofuran	75 U
606-20-2	2,6-Dinitrotoluene	380 U
121-14-2	2,4-Dinitrotoluene	380 U
84-66-2	Diethylphthalate	75 U
7005-72-3	4-Chlorophenyl-phenylether	75 U
86-73-7	Fluorene	75 U
100-01-6	4-Nitroaniline	380 U
534-52-1	4,6-Dinitro-2-Methylphenol	750 U
86-30-6	N-Nitrosodiphenylamine	75 U
101-55-3	4-Bromophenyl-phenylether	75 U
118-74-1	Hexachlorobenzene	75 U
87-86-5	Pentachlorophenol	380 U
85-01-8	Phenanthrene	75 U
86-74-8	Carbazole	75 U
120-12-7	Anthracene	75 U
84-74-2	Di-n-Butylphthalate	75 U
206-44-0	Fluoranthene	75 U
129-00-0	Pyrene	75 U
85-68-7	Butylbenzylphthalate	75 U
91-94-1	3,3'-Dichlorobenzidine	380 U
56-55-3	Benzo(a)anthracene	75 U
117-81-7	bis(2-Ethylhexyl)phthalate	120 B
218-01-9	Chrysene	75 U
117-84-0	Di-n-Octyl phthalate	75 U
205-99-2	Benzo(b)fluoranthene	75 U
207-08-9	Benzo(k)fluoranthene	75 U
50-32-8	Benzo(a)pyrene	75 U
193-39-5	Indeno(1,2,3-cd)pyrene	75 U
53-70-3	Dibenz(a,h)anthracene	75 U
191-24-2	Benzo(g,h,i)perylene	75 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	85.8%	d5-Phenol	74.3%
2-Fluorobiphenyl	45.8%	2-Fluorophenol	69.6%
d14-p-Terphenyl	83.0%	2,4,6-Tribromophenol	86.0%
d4-1,2-Dichlorobenzene	70.8%	d4-2-Chlorophenol	77.1%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 1 of 2

Sample No: Method Blank

Analytical
Chemists &
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Lab Sample ID: H117MB
LIMS ID: 94-6836
Matrix: Water
Data Release Authorized: *MM*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: NA
Date Received: NA

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/05/94
Date analyzed: 05/12/94
Instrument: FINN2

Sample Amount: 1000 ml
Final Extract Volume: 1.0 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
108-95-2	Phenol	2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	5.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0 U
67-72-1	Hexachloroethane	2.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	5.0 U
105-67-9	2,4-Dimethylphenol	2.0 U
65-85-0	Benzoic Acid	10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0 U
120-83-2	2,4-Dichlorophenol	3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	3.0 U
87-68-3	Hexachlorobutadiene	2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethylphthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	10 U



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
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Sample No: Method Blank

Analytical
Chemists &
Consultants

Lab Sample ID: H117MB
LIMS ID: 94-6836
Matrix: Water
Data Release Authorized: *MM*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: NA
Date Received: NA

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/05/94
Date analyzed: 05/12/94
Instrument: FINN2

Sample Amount: 1000 ml
Final Extract Volume: 1.0 ml
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
100-02-7	4-Nitrophenol	5.0 U
132-64-9	Dibenzofuran	1.0 U
606-20-2	2,6-Dinitrotoluene	5.0 U
121-14-2	2,4-Dinitrotoluene	5.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10 U
86-30-6	N-Nitrosodiphenylamine	1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0 U
118-74-1	Hexachlorobenzene	1.0 U
87-86-5	Pentachlorophenol	5.0 U
85-01-8	Phenanthrene	1.0 U
86-74-8	Carbazole	1.0 U
120-12-7	Anthracene	1.0 U
84-74-2	Di-n-Butylphthalate	1.0 U
206-44-0	Fluoranthene	1.0 U
129-00-0	Pyrene	1.0 U
85-68-7	Butylbenzylphthalate	1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0 U
56-55-3	Benzo(a)anthracene	1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0 U
218-01-9	Chrysene	1.0 U
117-84-0	Di-n-Octyl phthalate	1.0 U
205-99-2	Benzo(b)fluoranthene	1.0 U
207-08-9	Benzo(k)fluoranthene	1.0 U
50-32-8	Benzo(a)pyrene	1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	99.3%	d5-Phenol	40.2%
2-Fluorobiphenyl	83.9%	2-Fluorophenol	27.0%
d14-p-Terphenyl	90.6%	2,4,6-Tribromophenol	10.3%
d4-1,2-Dichlorobenzene	73.8%	d4-2-Chlorophenol	63.4%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 1 of 2

Sample No: Method Blank

Analytical
Chemists &
Consultants

Lab Sample ID: H117MB
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *NA*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: NA
Date Received: NA

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/11/94
Date analyzed: 05/13/94
Instrument: FINN2
GPC Cleanup: NO

Sample Amount: 30.0 g dry Wt Equiv
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: NA

CAS Number	Analyte	ug/kg
108-95-2	Phenol	130 U
111-44-4	Bis-(2-Chloroethyl) Ether	67 U
95-57-8	2-Chlorophenol	67 U
541-73-1	1,3-Dichlorobenzene	67 U
106-46-7	1,4-Dichlorobenzene	67 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	67 U
95-48-7	2-Methylphenol	67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67 U
106-44-5	4-Methylphenol	67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67 U
67-72-1	Hexachloroethane	130 U
98-95-3	Nitrobenzene	67 U
78-59-1	Isophorone	67 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	130 U
65-85-0	Benzoic Acid	670 U
111-91-1	bis(2-Chloroethoxy) Methane	67 U
120-83-2	2,4-Dichlorophenol	200 U
120-82-1	1,2,4-Trichlorobenzene	67 U
91-20-3	Naphthalene	67 U
106-47-8	4-Chloroaniline	200 U
87-68-3	Hexachlorobutadiene	130 U
59-50-7	4-Chloro-3-methylphenol	130 U
91-57-6	2-Methylnaphthalene	67 U
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	330 U
91-58-7	2-Chloronaphthalene	67 U
88-74-4	2-Nitroaniline	330 U
131-11-3	Dimethylphthalate	67 U
208-96-8	Acenaphthylene	67 U
99-09-2	3-Nitroaniline	330 U
83-32-9	Acenaphthene	67 U
51-28-5	2,4-Dinitrophenol	670 U



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS
Page 2 of 2

Sample No: Method Blank

Analytical
Chemists &
Consultants

Lab Sample ID: H117MB
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *AB*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: NA
Date Received: NA

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Date extracted: 05/11/94
Date analyzed: 05/13/94
Instrument: FINN2
GPC Cleanup: NO

Sample Amount: 30.0 g dry Wt Equiv
Final Extract Volume: 2.0 ml
Dilution Factor: 1:1
Percent Moisture: NA
pH: NA

CAS Number	Analyte	ug/kg
100-02-7	4-Nitrophenol	330 U
132-64-9	Dibenzofuran	67 U
606-20-2	2,6-Dinitrotoluene	330 U
121-14-2	2,4-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	67 U
7005-72-3	4-Chlorophenyl-phenylether	67 U
86-73-7	Fluorene	67 U
100-01-6	4-Nitroaniline	330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670 U
86-30-6	N-Nitrosodiphenylamine	67 U
101-55-3	4-Bromophenyl-phenylether	67 U
118-74-1	Hexachlorobenzene	67 U
87-86-5	Pentachlorophenol	330 U
85-01-8	Phenanthrene	67 U
86-74-8	Carbazole	67 U
120-12-7	Anthracene	67 U
84-74-2	Di-n-Butylphthalate	67 U
206-44-0	Fluoranthene	67 U
129-00-0	Pyrene	67 U
85-68-7	Butylbenzylphthalate	67 U
91-94-1	3,3'-Dichlorobenzidine	330 U
56-55-3	Benzo(a)anthracene	67 U
117-81-7	bis(2-Ethylhexyl)phthalate	100
218-01-9	Chrysene	67 U
117-84-0	Di-n-Octyl phthalate	67 U
205-99-2	Benzo(b)fluoranthene	67 U
207-08-9	Benzo(k)fluoranthene	67 U
50-32-8	Benzo(a)pyrene	67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67 U
53-70-3	Dibenz(a,h)anthracene	67 U
191-24-2	Benzo(g,h,i)perylene	67 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	103%	d5-Phenol	88.7%
2-Fluorobiphenyl	98.9%	2-Fluorophenol	84.8%
d14-p-Terphenyl	85.8%	2,4,6-Tribromophenol	71.8%
d4-1,2-Dichlorobenzene	88.1%	d4-2-Chlorophenol	86.0%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

Lab Sample ID: H117A

QC Report No: H117-Golder Associates

LIMS ID: 94-6836

Project: 933-1280

Matrix: Water

Norseland/Bremerton

Data Release Authorized: *DBP*

Date Sampled: 05/03/94

Reported: 05/23/94

Date Received: 05/04/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Instrument: FINN3

Amount Purged: 5.0 ml

Date Analyzed: 05/06/94

Conc/Dilution Factor: 1:1

CAS Number	Analyte	ug/L
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
67-66-3	Chloroform	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
75-15-0	Carbon Disulfide	1.0 U
75-09-2	Methylene Chloride	2.0 U
71-43-2	Benzene	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
74-83-9	Bromomethane	2.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-25-2	Bromoform	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
75-01-4	Vinyl Chloride	2.0 U
108-05-4	Vinyl Acetate	5.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
75-00-3	Chloroethane	2.0 U
107-06-2	1,2-Dichloroethane	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
591-78-6	2-Hexanone	5.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
74-87-3	Chloromethane	2.0 U
67-64-1	Acetone	5.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.2%
d8-Toluene	102%
Bromofluorobenzene	99.2%



Sample No: CUT-1

**ANALYTICAL
RESOURCES
INCORPORATED**

ORGANICS ANALYSIS DATA SHEET
Volatile by Purge & Trap GC/MS
Lab Sample ID: H117B
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *JSP*
Reported: 05/23/94

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280
Date Sampled: 05/03/94
Date Received: 05/04/94

Instrument: FINN5
Date Analyzed: 05/06/94

Sample Amount: 4.51 g dry Wt
Percent Moisture: 11.4%

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

CAS Number	Analyte	ug/kg
74-87-3	Chloromethane	2.2 U
74-83-9	Bromomethane	2.2 U
75-01-4	Vinyl Chloride	2.2 U
75-00-3	Chloroethane	2.2 U
75-09-2	Methylene Chloride	2.2 U
67-64-1	Acetone	6.1
75-15-0	Carbon Disulfide	1.1 U
75-35-4	1,1-Dichloroethene	1.1 U
75-34-3	1,1-Dichloroethane	1.1 U
156-60-5	trans-1,2-Dichloroethene	1.1 U
156-59-2	cis-1,2-Dichloroethene	1.1 U
67-66-3	Chloroform	1.1 U
107-06-2	1,2-Dichloroethane	1.1 U
78-93-3	2-Butanone	5.5 U
71-55-6	1,1,1-Trichloroethane	1.1 U
56-23-5	Carbon Tetrachloride	1.1 U
108-05-4	Vinyl Acetate	5.5 U
75-27-4	Bromodichloromethane	1.1 U
78-87-5	1,2-Dichloropropane	1.1 U
10061-01-5	cis-1,3-Dichloropropene	1.1 U
79-01-6	Trichloroethene	1.1 U
124-48-1	Dibromochloromethane	1.1 U
79-00-5	1,1,2-Trichloroethane	1.1 U
71-43-2	Benzene	1.1 U
10061-02-6	trans-1,3-Dichloropropene	1.1 U
110-75-8	2-Chloroethylvinylether	5.5 U
75-25-2	Bromoform	1.1 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.5 U
591-78-6	2-Hexanone	5.5 U
127-18-4	Tetrachloroethene	1.1 U
79-34-5	1,1,2,2-Tetrachloroethane	1.1 U
108-88-3	Toluene	1.1 U
108-90-7	Chlorobenzene	1.1 U
100-41-4	Ethylbenzene	1.1 U
100-42-5	Styrene	1.1 U
1330-20-7	Total Xylenes	2.2 U
75-69-4	Trichlorofluoromethane	2.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.2 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.5%
d8-Toluene	101%
Bromofluorobenzene	94.7%
d4-1,2-Dichlorobenzene	100%



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
Lab Sample ID: 050694MB
LIMS ID: 94-6837
Matrix: Soil
Data Release Authorized: *NB*
Reported: 05/23/94

Sample No: Method Blank

QC Report No: H117-Golder Associates
Project: Norseland/Bremerton
933-1280

Date Sampled: NA
Date Received: NA

Instrument: FINN5
Date Analyzed: 05/06/94

Sample Amount: 5.00 g dry Wt Equiv
Percent Moisture: NA

CAS Number	Analyte	ug/kg
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	99.9%



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

Lab Sample ID: 050694MB

Sample No: Method Blank

LIMS ID: 94-6836

QC Report No: H117-Golder Associates

Matrix: Water

Project: 933-1280

Data Release Authorized: DOP

Norseland/Bremerton

Reported: 05/23/94

Date Sampled: NA

Date Received: NA

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Instrument: FINN3

Amount Purged: 5.0 ml

Date Analyzed: 05/06/94

Conc/Dilution Factor: 1:1

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.8%
d8-Toluene	102%
Bromofluorobenzene	98.2%

ORGANICS ANALYSIS DATA SHEET
Volatile by GC/MS



ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: H117SB QC Report No: H117-Golder Associates
LIMS ID: 94-6837 Project: Norseland/Bremerton
Matrix: Soil 933-1280
Date Received: 05/04/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized: *001*
Reported: 05/23/94
Date Analyzed: 05/06/94

BLANK SPIKE RECOVERY CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	38.4	50.0	76.8%
Bromomethane	46.1	50.0	92.2%
Vinyl Chloride	41.3	50.0	82.6%
Chloroethane	43.5	50.0	87.0%
Methylene Chloride	49.8	50.0	99.6%
Acetone	47.0	50.0	94.0%
Carbon Disulfide	46.3	50.0	92.6%
1,1-Dichloroethene	48.4	50.0	96.8%
1,1-Dichloroethane	50.1	50.0	100%
trans-1,2-Dichloroethene	48.8	50.0	97.6%
cis-1,2-Dichloroethene	47.3	50.0	94.6%
Chloroform	49.6	50.0	99.2%
1,2-Dichloroethane	49.8	50.0	99.6%
2-Butanone	46.7	50.0	93.4%
1,1,1-Trichloroethane	47.3	50.0	94.6%
Carbon Tetrachloride	48.8	50.0	97.6%
Vinyl Acetate	45.5	50.0	91.0%
Bromodichloromethane	48.0	50.0	96.0%
1,2-Dichloropropane	49.5	50.0	99.0%
cis-1,3-Dichloropropene	50.7	50.0	101%
Trichloroethene	49.2	50.0	98.4%
Dibromochloromethane	46.6	50.0	93.2%
1,1,2-Trichloroethane	48.2	50.0	96.4%
Benzene	48.6	50.0	97.2%
trans-1,3-Dichloropropene	48.2	50.0	96.4%
2-Chloroethylvinylether	49.7	50.0	99.4%

Spike Blank Surrogate Recovery

d4-1,2-Dichloroethane	101.%
d8-Toluene	100.%
Bromofluorobenzene	103.%
d4-1,2-Dichlorobenzene	96.6%

FORM-III

ORGANICS ANALYSIS DATA SHEET
Volatile by GC/MS



ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: H117SB QC Report No: H117-Golder Associates
LIMS ID: 94-6837 Project: Norseland/Bremerton
Matrix: Soil 933-1280
Date Received: 05/04/94

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Data Release Authorized: *AM*
Reported: 05/23/94
Date Analyzed: 05/06/94

BLANK SPIKE RECOVERY CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Bromoform	48.2	50.0	96.4%
4-Methyl-2-Pentanone (MIBK)	52.0	50.0	104%
2-Hexanone	47.9	50.0	95.8%
Tetrachloroethene	47.0	50.0	94.0%
1,1,2,2-Tetrachloroethane	47.2	50.0	94.4%
Toluene	48.4	50.0	96.8%
Chlorobenzene	47.4	50.0	94.8%
Ethylbenzene	46.7	50.0	93.4%
Styrene	48.4	50.0	96.8%
Total Xylenes	142.	150	94.7%
Trichlorofluoromethane	45.2	50.0	90.4%
1,1,2-Trichlorotrifluoroethane	49.4	50.0	98.8%
m,p-Xylene	94.5	100	94.5%
O-Xylene	47.1	50.0	94.2%

FORM-III

4117

higher Temp: 10°C

CHAIN OF CUSTODY RECORD

**INITIAL SOIL VAPOR STUDY DATA
ANALYTICAL DATA**

AIR TOXICS LTD.

SAMPLE NAME: SV-5

ID#: 9403226-01A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	EO41303	Date of Collection: 3/25/94
Dil. Factor:	1.0	Date of Extraction: 3/30/94
		Date of Analysis: 4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.20
Acetaldehyde	0.10	0.70
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-5 Duplicate

ID#: 9403226-01AA

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041304	Date of Collection: 3/25/94
Dil. Factor:	1.0	Date of Extraction: 3/30/94
		Date of Analysis: 4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.18
Acetaldehyde	0.10	0.70
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-9

ID#: 9403226-02A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041305	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.33
Acetaldehyde	0.10	0.84
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-15

ID#: 9403226-03A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041306	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.38
Acetaldehyde	0.10	0.85
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-26

ID#: 9403226-04A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041307	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.54
Acetaldehyde	0.10	0.46
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-49

ID#: 9403226-05A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	EO41308	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.15
Acetaldehyde	0.10	0.43
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-44

ID#: 9403226-06A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041309	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.10
Acetaldehyde	0.10	0.32
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-22

ID#: 9403226-07A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041310	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.36
Acetaldehyde	0.10	0.92
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-32

ID#: 9403226-08A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041311	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.10
Acetaldehyde	0.10	0.35
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-31

ID#: 9403226-09A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041312	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.13
Acetaldehyde	0.10	0.25
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: EB-35

ID#: 9403226-10A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041315	Date of Collection: 3/24/94
Dil. Factor:	1.0	Date of Extraction: 3/30/94
		Date of Analysis: 4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	Not Detected
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SVD-42

ID#: 9403226-11A

Ambient Air: EPA Method TO - 11

DNPH Coated Cartridge

High Pressure Liquid Chromatography

File Name:	E041316	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.14
Acetaldehyde	0.10	0.33
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SVD-42 Duplicate

ID#: 9403226-11AA

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041317	Date of Collection: 3/25/94
Dil. Factor:	1.0	Date of Extraction: 3/30/94
		Date of Analysis: 4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.13
Acetaldehyde	0.10	0.31
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SVD-47

ID#: 9403226-12A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041318	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.13
Acetaldehyde	0.10	0.26
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-3

ID#: 9403226-13A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041319	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.16
Acetaldehyde	0.10	0.38
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-46

ID#: 9403226-14A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041320	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	Not Detected
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-45

ID#: 9403226-15A

Ambient Air: EPA Method TO - 11

DNPH Coated Cartridge

High Pressure Liquid Chromatography

File Name:	E041321	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	0.16
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-51

ID#: 9403226-16A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	EO41322	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	0.20
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-25*

ID#: 9403226-17A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	NA	Date of Collection: 3/25/94
Dil. Factor:	1.0	Date of Extraction: NA
		Date of Analysis: NA

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Analyzed
Acetaldehyde	0.10	Not Analyzed
Acrolein	0.10	Not Analyzed

*Sample not analyzed per client's request.

AIR TOXICS LTD.

SAMPLE NAME: SV-6

ID#: 9403226-18A

Ambient Air: EPA Method TO - 11

DNPH Coated Cartridge

High Pressure Liquid Chromatography

File Name:	EO41323	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.49
Acetaldehyde	0.10	0.82
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-19

ID#: 9403226-19A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041324	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.46
Acetaldehyde	0.10	1.1
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-42

ID#: 9403226-20A

Ambient Air: EPA Method TO - 11

DNPH Coated Cartridge

High Pressure Liquid Chromatography

File Name:	E041404	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/14/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.14
Acetaldehyde	0.10	0.31
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-35

ID#: 9403226-21A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041328	Date of Collection:	3/25/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.20
Acetaldehyde	0.10	0.88
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-1

ID#: 9403226-22A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041329	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	Not Detected
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-47

ID#: 9403226-23A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041330	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.19
Acetaldehyde	0.10	0.28
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-10

ID#: 9403226-24A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041331	Date of Collection: 3/24/94
Dil. Factor:	1.0	Date of Extraction: 3/30/94
		Date of Analysis: 4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	Not Detected
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-36

ID#: 9403226-25A

Ambient Air: EPA Method TO - 11
DNPH Coated Cartridge
High Pressure Liquid Chromatography

File Name:	E041332	Date of Collection:	3/24/94
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	0.15
Acetaldehyde	0.10	0.25
Acrolein	0.10	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403226-26A

Ambient Air: EPA Method TO - 11

DNPH Coated Cartridge

High Pressure Liquid Chromatography

File Name:	E041333	Date of Collection:	NA
Dil. Factor:	1.0	Date of Extraction:	3/30/94
		Date of Analysis:	4/13/94

Compound	Det. Limit (uG)	Amount (uG)
Formaldehyde	0.10	Not Detected
Acetaldehyde	0.10	Not Detected
Acrolein	0.10	Not Detected



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

9403226

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

CHAIN OF CUSTODY RECORD

PROJECT # NORSLAND PO #
 REMARKS: All samples plugged, labeled, capped into test tube and kept cool in cooler with ice packs. 13 samples on this chain of cust.

Page 2 of 2
Tom Stapp

FIELD SAMPLE I.D.#	SAMPLING MEDIA (Tenax, Canister etc.)	DATE/TIME	ANALYSIS	VAC./PRESSURE	LAB I.D. #
13A	Sep-Pak (Bartendes)	3-25-94 1037	ALDEHYDES		
14A	-46	3-25-94 1007			
15A	-45	3-24-94 1212			
16A	-51	3-24-94 1142			
17A	-25	3-25-94 1145			
18A	-6	3-24-94 1102			
PA	-19	3-24-94 1300			
20A	-42	3-25-94 1752	→	1023	
21A	-35	3-24-94 1803			
20A	-1	3-24-94 1526			
23A	-47	3-24-94 1745			
24A	-10	3-24-94 1745			
RELINQUISHED BY: DATE/TIME		RECEIVED BY: DATE/TIME	RELINQUISHED BY: DATE/TIME	RECEIVED BY: DATE/TIME	
T. Stapp CAT 3-25-94		Thelma Schmitz	3-26-94 955		
35A SV-36 Sep/tak		3-24-94 1540	ALDEHYDES		
LAB USE ONLY					
SHIPPER NAME	AIR BILL #	OPENED BY: DATE/TIME	TEMP (°C)	CONDITION	
fed-X	4364747890 T Schmitz	Cool	Good		
REMARKS: <u>Custody Seal intact</u>					



AIR TOXICS LTD.

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CHAIN OF CUSTODY RECORD

Page 1 of 2

PROJECT # NORSLAND PO #
 REMARKS All samples plugged, capped into test tube, labeled and kept cool with ice
12 SepPak cartridges total with this case.

FIELD SAMPLE I.D.#	SAMPLING MEDIA (Tenax, Canister etc.)	DATE/TIME	ANALYSIS	VAC./PRESSURE	LAB I.D. #
01A SV-S	Sep Pak Cartridge	3-25-94 1046	ALDEHYDES		
02A -9		1058			
03A -15		1054			
04A -26		1140			
05A -49		3-24-94 1505			
06A -44		1516			
07A -22		1738			
08A -32		3-24-94 1728			
09A -31		3-24-94 1545			
10A EB-35		3-24-94 1803			
11A/B SVD-42		3-25-94			
12A SVD-47		3-25-94			

RELINQUISHED BY: DATE/TIME T. Stapp 6AI 3-25-94

RECEIVED BY: DATE/TIME J. Muller Schmitt

RELINQUISHED BY: DATE/TIME T. Stapp 6AI 3-26-94 9:55

RECEIVED BY: DATE/TIME

LAB USE ONLY

SHIPPER NAME	AIR BILL #	OPENED BY: DATE/TIME	TEMP(°C)	CONDITION
Fed-X	4764747890	T Schmidt	cool	Good
REMARKS	<u>Custody seals present and intact</u>			

AIR TOXICS LTD.SAMPLE NAME: SV-40
ID#: 9403200-01A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032430	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-46
ID#: 9403200-02A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032431	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-35
ID#: 9403200-03A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032432	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-51
ID#: 9403200-04A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032433	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-45
ID#: 9403200-05A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032434	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-42
ID#: 9403200-06A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032435	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-36
ID#: 9403200-07A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032436	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-31
ID#: 9403200-08A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032437	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-32
ID#: 9403200-09A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032438	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-10
ID#: 9403200-10A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032439	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-10 Duplicate
ID#: 9403200-10B**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032455	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-3
ID#: 9403200-11A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032440	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-1
ID#: 9403200-12A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032441	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-5
ID#: 9403200-13A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name: 2032442 **Date of Collection:** 3/23/94
Dil. Factor: 1.0 **Date of Analysis:** 3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-9
ID#: 9403200-14A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032443	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-15
ID#: 9403200-15A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032444	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-6
ID#: 9403200-16A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032445	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-16
ID#: 9403200-17A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032446	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-18
ID#: 9403200-18A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032447	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-19
ID#: 9403200-19A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032448	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-26
ID#: 9403200-20A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032449	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-26 Duplicate
ID#: 9403200-20B**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032456	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-25
ID#: 9403200-21A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032450	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-47
ID#: 9403200-22A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032451	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

<u>Compound</u>	<u>Det. Limit (ppmv)</u>	<u>Amount (ppmv)</u>
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-44
ID#: 9403200-23A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032452	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-49
ID#: 9403200-24A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032453	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: EB
ID#: 9403200-25A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032454	Date of Collection:	3/23/94
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

AIR TOXICS LTD.SAMPLE NAME: Method Spike
ID#: 9403200-26A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032401	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	% Recovery
Hydrogen Sulfide	0.050	101
Carbonyl Sulfide	0.050	124
Methyl Mercaptan	0.050	105
Dimethyl Sulfide	0.050	109
Carbon Disulfide	0.050	95
Dimethyl Disulfide	0.050	103

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403200-27A**Sulfur Gases by GC/FPD**
EPA Method 15/16

File Name:	2032425	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	3/24/94

Compound	Det. Limit (ppmv)	Amount (ppmv)
Hydrogen Sulfide	0.050	Not Detected
Carbonyl Sulfide	0.050	Not Detected
Methyl Mercaptan	0.050	Not Detected
Dimethyl Sulfide	0.050	Not Detected
Carbon Disulfide	0.050	Not Detected
Dimethyl Disulfide	0.050	Not Detected

CHAIN OF CUSTODY RECORD

PROJ. NO.	SITE/LOCATION				NO. OF CONTAINERS	AMOUNT/TYPE PRESERVATIVE	SAMPLE IDENTIFICATION	MEDIA	TIME	DATE	STA. NO.	SAMPLERS: (Signature)
	SEAL NO.	SEAL INTACT? (Y/N)	REMARKS (with initials)									
933-1280	Norseland / Burmerton, WI											
	<i>Tom Stapp Greg. Moon</i>											
SV-440	3/23/94	11:10	Cod. Air	SV-440	1	X						
SV-446	"	11:24	"	SV-446	1	X						
SV-35	"	11:37	"	SV-35	1	X						
SV-51	"	12:03	"	SV-51	1	X						
SV-45	"	12:15	"	SV-45	1	X						
SV-42	"	12:31	"	SV-42	1	X						
SV-36	"	12:50	"	SV-36	1	X						
SV-31	"	13:05	"	SV-31	1	X						
SV-32	"	13:18	"	SV-32	1	X						
SV-10	"	13:31	"	SV-10	1	X						
SV-3	"	13:41	"	SV-3	1	X						
SV-1	"	13:50	"	SV-1	1	X						
Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)
<i>J. Stapp GAT</i>	3-23-94 1630	<i>John Albrecht</i>	<i>3/24/94</i>									
Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)
Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/ Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)

Chadwick Seal intact - samples received at return time in good condition.
3/24/94

AIR TOXICS LTD.

SAMPLE NAME: SV-51

ID#: 9403227A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040211	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/2/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-51

ID#: 9403227A-01A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040211	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/2/94

Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-45

ID#: 9403227A-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 5040409 Date of Collection: 3/24/94
 Dil. Factor: 1.5 Date of Analysis: 4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	1.2
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-45

ID#: 9403227A-02A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040409	Date of Collection:	3/24/94
Dil. Factor:	1.5	Date of Analysis:	4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
2-Butanone	78-93-3	Calibrated	36
Unknown Hydrocarbon	NA	NA	8.4
Acetone	67-64-1	Calibrated	7.2
Nonane	111-84-2	81 %	1000
Propyl-cyclopropane	2415-72-7	64 %	10
Decane	124-18-5	76 %	8.5
Unknown	NA	NA	12
Undecane	1120-21-4	91 %	210
Unknown Hydrocarbon	NA	NA	8.7
1-Methyl-naphthalene	90-12-0	58 %	7.0

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-42

ID#: 9403227A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040410	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	1.0
Freon 114	0.70	Not Detected
Chloromethane	0.70	0.87
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	2.0
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	1.8
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	0.81
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	0.73
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-42

ID#: 9403227A-03A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040410	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	5.6
Acetone	67-64-1	Calibrated	14
2-Butanone	78-93-3	Calibrated	7.3
Nonane	111-84-2	59 %	5.0

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-42D

ID#: 9403227A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040411	Date of Collection:	3/24/94
Dil. Factor:	2.2	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	Not Detected
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	Not Detected
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-42D

ID#: 9403227A-04A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040411	Date of Collection:	3/24/94
Dil. Factor:	2.2	Date of Analysis:	4/4/94
Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	5.7
Acetone	67-64-1	Calibrated	13
2-Butanone	78-93-3	Calibrated	6.0

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-22

ID#: 9403227A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040412	Date of Collection:	3/24/94
Dil. Factor:	4.1	Date of Analysis:	4/4/94
Compound		Det. Limit (ppbv)	Amount (ppbv)
Freon 12		2.1	2.2
Freon 114		2.1	Not Detected
Chloromethane		2.1	Not Detected
Vinyl Chloride		2.1	Not Detected
Bromomethane		2.1	Not Detected
Chloroethane		2.1	Not Detected
Freon 11		2.1	Not Detected
1,1-Dichloroethene		2.1	Not Detected
Freon 113		2.1	Not Detected
Methylene Chloride		2.1	Not Detected
1,1-Dichloroethane		2.1	Not Detected
cis-1,2-Dichloroethene		2.1	Not Detected
Chloroform		2.1	16
1,1,1-Trichloroethane		2.1	Not Detected
Carbon Tetrachloride		2.1	Not Detected
Benzene		2.1	Not Detected
1,2-Dichloroethane		2.1	Not Detected
Trichloroethene		2.1	Not Detected
1,2-Dichloropropane		2.1	Not Detected
cis-1,3-Dichloropropene		2.1	Not Detected
Toluene		2.1	4.1
trans-1,3-Dichloropropene		2.1	Not Detected
1,1,2-Trichloroethane		2.1	Not Detected
Tetrachloroethene		2.1	Not Detected
Ethylene Dibromide		2.1	Not Detected
Chlorobenzene		2.1	Not Detected
Ethyl Benzene		2.1	Not Detected
m,p-Xylene		2.1	Not Detected
o-Xylene		2.1	Not Detected
Styrene		2.1	Not Detected
1,1,2,2-Tetrachloroethane		2.1	Not Detected
1,3,5-Trimethylbenzene		2.1	Not Detected
1,2,4-Trimethylbenzene		2.1	Not Detected
1,3-Dichlorobenzene		2.1	Not Detected
1,4-Dichlorobenzene		2.1	Not Detected
Chlorotoluene		2.1	Not Detected
1,2-Dichlorobenzene		2.1	Not Detected
1,2,4-Trichlorobenzene		2.1	Not Detected
Hexachlorobutadiene		2.1	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-22

ID#: 9403227A-05A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040412	Date of Collection:	3/24/94
Dil. Factor:	4.1	Date of Analysis:	4/4/94
Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	11
Acetone	67-64-1	Calibrated	16

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-10

ID#: 9403227A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040413	Date of Collection:	3/24/94
Dil. Factor:	3.7	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.9	6.3
Freon 114	1.9	4.5
Chloromethane	1.9	Not Detected
Vinyl Chloride	1.9	Not Detected
Bromomethane	1.9	Not Detected
Chloroethane	1.9	Not Detected
Freon 11	1.9	Not Detected
1,1-Dichloroethene	1.9	Not Detected
Freon 113	1.9	Not Detected
Methylene Chloride	1.9	Not Detected
1,1-Dichloroethane	1.9	Not Detected
cis-1,2-Dichloroethene	1.9	Not Detected
Chloroform	1.9	Not Detected
1,1,1-Trichloroethane	1.9	Not Detected
Carbon Tetrachloride	1.9	Not Detected
Benzene	1.9	14
1,2-Dichloroethane	1.9	Not Detected
Trichloroethene	1.9	Not Detected
1,2-Dichloropropane	1.9	Not Detected
cis-1,3-Dichloropropene	1.9	Not Detected
Toluene	1.9	2.3
trans-1,3-Dichloropropene	1.9	Not Detected
1,1,2-Trichloroethane	1.9	Not Detected
Tetrachloroethene	1.9	Not Detected
Ethylene Dibromide	1.9	Not Detected
Chlorobenzene	1.9	Not Detected
Ethyl Benzene	1.9	Not Detected
m,p-Xylene	1.9	Not Detected
o-Xylene	1.9	Not Detected
Styrene	1.9	Not Detected
1,1,2,2-Tetrachloroethane	1.9	Not Detected
1,3,5-Trimethylbenzene	1.9	Not Detected
1,2,4-Trimethylbenzene	1.9	Not Detected
1,3-Dichlorobenzene	1.9	Not Detected
1,4-Dichlorobenzene	1.9	Not Detected
Chlorotoluene	1.9	Not Detected
1,2-Dichlorobenzene	1.9	Not Detected
1,2,4-Trichlorobenzene	1.9	Not Detected
Hexachlorobutadiene	1.9	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-10

ID#: 9403227A-06A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040413	Date of Collection:	3/24/94
Dil. Factor:	3.7	Date of Analysis:	4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Trimethyl Hexane	NA	74 %	830
Unknown Dimethyl Octane	NA	90 %	830
Unknown Hydrocarbon	NA	NA	640
Unknown Dimethyl Octane	NA	53 %	1600
Unknown Hydrocarbon	NA	NA	620
Unknown Methyl-nonane	NA	72 %	600
Unknown Hydrocarbon	NA	NA	670
Unknown Hydrocarbon	NA	NA	1400
Unknown Trimethyl-heptane	NA	78 %	500
Unknown	NA	NA	600

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-32

ID#: 9403227A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040713	Date of Collection:	3/24/94
Dil. Factor:	1.6	Date of Analysis:	4/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	2.2
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	Not Detected
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	Not Detected
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-32

ID#: 9403227A-07A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040713	Date of Collection:	3/24/94
Dil. Factor:	1.6	Date of Analysis:	4/7/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	3.9
Acetone	67-64-1	Calibrated	16
2-Butanone	78-93-3	Calibrated	18
Acetaldehyde	75-07-0	45 %	8.4
Unknown Aromatic	NA	NA	5.3
Unknown Hydrocarbon	NA	NA	5.2

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-32D

ID#: 9403227A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040415	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	2.4
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	0.95
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	0.73
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-32D

ID#: 9403227A-08A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name: 5040415 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	11
Carbon Disulfide	75-15-0	Calibrated	6.3
2-Butanone	78-93-3	Calibrated	21

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limita
Octafluorotoluene	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-44

ID#: 9403227A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040416	Date of Collection:	3/24/94
Dil. Factor:	2.8	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.4	Not Detected
Freon 114	1.4	Not Detected
Chloromethane	1.4	Not Detected
Vinyl Chloride	1.4	Not Detected
Bromomethane	1.4	Not Detected
Chloroethane	1.4	Not Detected
Freon 11	1.4	Not Detected
1,1-Dichloroethene	1.4	Not Detected
Freon 113	1.4	Not Detected
Methylene Chloride	1.4	Not Detected
1,1-Dichloroethane	1.4	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected
Chloroform	1.4	Not Detected
1,1,1-Trichloroethane	1.4	Not Detected
Carbon Tetrachloride	1.4	Not Detected
Benzene	1.4	Not Detected
1,2-Dichloroethane	1.4	Not Detected
Trichloroethene	1.4	Not Detected
1,2-Dichloropropane	1.4	Not Detected
cis-1,3-Dichloropropene	1.4	Not Detected
Toluene	1.4	Not Detected
trans-1,3-Dichloropropene	1.4	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected
Tetrachloroethene	1.4	Not Detected
Ethylene Dibromide	1.4	Not Detected
Chlorobenzene	1.4	Not Detected
Ethyl Benzene	1.4	Not Detected
m,p-Xylene	1.4	Not Detected
o-Xylene	1.4	Not Detected
Styrene	1.4	Not Detected
1,1,2,2-Tetrachloroethane	1.4	Not Detected
1,3,5-Trimethylbenzene	1.4	Not Detected
1,2,4-Trimethylbenzene	1.4	Not Detected
1,3-Dichlorobenzene	1.4	Not Detected
1,4-Dichlorobenzene	1.4	Not Detected
Chlorotoluene	1.4	Not Detected
1,2-Dichlorobenzene	1.4	Not Detected
1,2,4-Trichlorobenzene	1.4	Not Detected
Hexachlorobutadiene	1.4	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-44
ID#: 9403227A-09A**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040416	Date of Collection:	3/24/94
Dil. Factor:	2.8	Date of Analysis:	4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	7.1

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-49

ID#: 9403227A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040505	Date of Collection:	3/24/94
Dil. Factor:	2.1	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	Not Detected
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	Not Detected
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-49

ID#: 9403227A-10A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040505	Date of Collection:	3/24/94
Dil. Factor:	2.1	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	11
Carbon Disulfide	75-15-0	Calibrated	5.3
2-Butanone	78-93-3	Calibrated	7.1
Chlorodifluoromethane	75-45-6	10 %	490
2-Propenenitrile	107-13-1	64 %	8.3

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-49 Duplicate

ID#: 9403227A-10B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040512	Date of Collection: 3/24/94
Dil. Factor:	2.7	Date of Analysis: 4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.4	Not Detected
Freon 114	1.4	Not Detected
Chloromethane	1.4	Not Detected
Vinyl Chloride	1.4	Not Detected
Bromomethane	1.4	Not Detected
Chloroethane	1.4	Not Detected
Freon 11	1.4	Not Detected
1,1-Dichloroethene	1.4	Not Detected
Freon 113	1.4	Not Detected
Methylene Chloride	1.4	Not Detected
1,1-Dichloroethane	1.4	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected
Chloroform	1.4	Not Detected
1,1,1-Trichloroethane	1.4	Not Detected
Carbon Tetrachloride	1.4	Not Detected
Benzene	1.4	Not Detected
1,2-Dichloroethane	1.4	Not Detected
Trichloroethene	1.4	Not Detected
1,2-Dichloropropane	1.4	Not Detected
cis-1,3-Dichloropropene	1.4	Not Detected
Toluene	1.4	Not Detected
trans-1,3-Dichloropropene	1.4	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected
Tetrachloroethene	1.4	Not Detected
Ethylene Dibromide	1.4	Not Detected
Chlorobenzene	1.4	Not Detected
Ethyl Benzene	1.4	Not Detected
m,p-Xylene	1.4	Not Detected
o-Xylene	1.4	Not Detected
Styrene	1.4	Not Detected
1,1,2,2-Tetrachloroethane	1.4	Not Detected
1,3,5-Trimethylbenzene	1.4	Not Detected
1,2,4-Trimethylbenzene	1.4	Not Detected
1,3-Dichlorobenzene	1.4	Not Detected
1,4-Dichlorobenzene	1.4	Not Detected
Chlorotoluene	1.4	Not Detected
1,2-Dichlorobenzene	1.4	Not Detected
1,2,4-Trichlorobenzene	1.4	Not Detected
Hexachlorobutadiene	1.4	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-49 Duplicate
ID#: 9403227A-10B**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040512	Date of Collection:	3/24/94
Dil. Factor:	2.7	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	13
Carbon Disulfide	75-15-0	Calibrated	6.1
2-Butanone	78-93-3	Calibrated	7.8
Chlorodifluoromethane	75-45-6	10 %	600
2-Propenenitrile	107-13-1	56 %	7.6

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-47

ID#: 9403227A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040513	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.70
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-47

ID#: 9403227A-11A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040513	Date of Collection:	3/24/94
Dil. Factor:	1.4	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	12
2-Butanone	78-93-3	Calibrated	7.7
Butanal	123-72-8	80 %	5.3
Hexanal	66-25-1	80 %	5.5

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-36

ID#: 9403227A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040514	Date of Collection: 3/24/94
Dil. Factor:	2.4	Date of Analysis: 4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.2	3.5
Freon 114	1.2	Not Detected
Chloromethane	1.2	Not Detected
Vinyl Chloride	1.2	Not Detected
Bromomethane	1.2	Not Detected
Chloroethane	1.2	Not Detected
Freon 11	1.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected
Freon 113	1.2	Not Detected
Methylene Chloride	1.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected
Chloroform	1.2	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected
Benzene	1.2	Not Detected
1,2-Dichloroethane	1.2	Not Detected
Trichloroethene	1.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected
Toluene	1.2	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected
Tetrachloroethene	1.2	5.5
Ethylene Dibromide	1.2	Not Detected
Chlorobenzene	1.2	Not Detected
Ethyl Benzene	1.2	Not Detected
m,p-Xylene	1.2	Not Detected
o-Xylene	1.2	Not Detected
Styrene	1.2	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected
Chlorotoluene	1.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected
Hexachlorobutadiene	1.2	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-36

ID#: 9403227A-12A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040514	Date of Collection:	3/24/94
Dil. Factor:	2.4	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	20
2-Butanone	78-93-3	Calibrated	8.0
Unknown Hydrocarbon	NA	NA	12

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-1

ID#: 9403227A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040515	Date of Collection:	3/24/94
Dil. Factor:	1.3	Date of Analysis: 4/5/94	

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	0.94
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-1
ID#: 9403227A-13A**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040515	Date of Collection:	3/24/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	6.5
Unknown Dimethyl-undecane	NA	72 %	3.7

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-31

ID#: 9403227A-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040519	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.6
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	2.4
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-31

ID#: 9403227A-14A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040519	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	7.8
2-Methyl-pentane	107-83-5	53 %	6.9
Hexane	110-54-3	53 %	5.7

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-46

ID#: 9403227A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040520	Date of Collection: 3/25/94
Dil. Factor:	1.6	Date of Analysis: 4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	Not Detected
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	Not Detected
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-46

ID#: 9403227A-15A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040520	Date of Collection:	3/25/94
Dil. Factor:	1.6	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
3-Carene	13466-78-9	90 %	5.7
Octadecanal	638-66-4	38 %	5.3

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-25*

ID#: 9403227A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	NA	Date of Collection: 3/25/94
Dil. Factor:	1.0	Date of Analysis: NA
Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Analyzed
Freon 114	0.50	Not Analyzed
Chloromethane	0.50	Not Analyzed
Vinyl Chloride	0.50	Not Analyzed
Bromomethane	0.50	Not Analyzed
Chloroethane	0.50	Not Analyzed
Freon 11	0.50	Not Analyzed
1,1-Dichloroethene	0.50	Not Analyzed
Freon 113	0.50	Not Analyzed
Methylene Chloride	0.50	Not Analyzed
1,1-Dichloroethane	0.50	Not Analyzed
cis-1,2-Dichloroethene	0.50	Not Analyzed
Chloroform	0.50	Not Analyzed
1,1,1-Trichloroethane	0.50	Not Analyzed
Carbon Tetrachloride	0.50	Not Analyzed
Benzene	0.50	Not Analyzed
1,2-Dichloroethane	0.50	Not Analyzed
Trichloroethene	0.50	Not Analyzed
1,2-Dichloropropane	0.50	Not Analyzed
cis-1,3-Dichloropropene	0.50	Not Analyzed
Toluene	0.50	Not Analyzed
trans-1,3-Dichloropropene	0.50	Not Analyzed
1,1,2-Trichloroethane	0.50	Not Analyzed
Tetrachloroethene	0.50	Not Analyzed
Ethylene Dibromide	0.50	Not Analyzed
Chlorobenzene	0.50	Not Analyzed
Ethyl Benzene	0.50	Not Analyzed
m,p-Xylene	0.50	Not Analyzed
o-Xylene	0.50	Not Analyzed
Styrene	0.50	Not Analyzed
1,1,2,2-Tetrachloroethane	0.50	Not Analyzed
1,3,5-Trimethylbenzene	0.50	Not Analyzed
1,2,4-Trimethylbenzene	0.50	Not Analyzed
1,3-Dichlorobenzene	0.50	Not Analyzed
1,4-Dichlorobenzene	0.50	Not Analyzed
Chlorotoluene	0.50	Not Analyzed
1,2-Dichlorobenzene	0.50	Not Analyzed
1,2,4-Trichlorobenzene	0.50	Not Analyzed
Hexachlorobutadiene	0.50	Not Analyzed

AIR TOXICS LTD.

SAMPLE NAME: SV-25*

ID#: 9403227A-16A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	NA	Date of Collection:	3/25/94
DII. Factor:	1.0	Date of Analysis:	NA
Compound	CAS Number	Match Quality	Amount (ppbv)
Not Analyzed			

'Sample not analyzed per client's request.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	NA	70-130
Toluene-d8	NA	70-130
4-Bromofluorobenzene	NA	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-6

ID#: 9403227A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040521	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-6

ID#: 9403227A-17A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040521	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/6/94
Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown Hydrocarbon	NA	NA	4.0
Acetone	67-64-1	Calibrated	11

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-19

ID#: 9403227A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040522	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis: 4/6/94	

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	1.2
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.2
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-19

ID#: 9403227A-18A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040522	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Ethanol	64-17-5	Calibrated	46
Acetone	67-64-1	Calibrated	15
2-Propanol	67-63-0	Calibrated	4.5
2-Butanone	78-93-3	Calibrated	6.0
1-Hexanol	111-27-3	78 %	10
Methyl(1-Methyl Ethyl)benzene	25155-15-1	94 %	22
Unknown Diethyl-cyclobutane	NA	64 %	9.0
Unknown Hydrocarbon	NA	NA	5.7
Unknown Hydrocarbon	NA	NA	8.6
Unknown Dimethyl-undecane	NA	64 %	13

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-EB

ID#: 9403227A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040523	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-EB

ID#: 9403227A-19A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040523	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	8.8
Decane	124-18-5	52 %	4.4
4-Methyl-decane	2847-72-5	81 %	4.4
Unknown Hydrocarbon	NA	NA	4.9
Dodecane	112-40-3	93 %	20
Unknown Hydrocarbon	NA	NA	12
Unknown Substituted Cyclohexane	NA	NA	8.8
Tridecane	629-50-5	90 %	5.5
Unknown Hydrocarbon	NA	NA	4.2

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-9

ID#: 9403227A-20A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040524	Date of Collection: 3/25/94
Dil. Factor:	1.4	Date of Analysis: 4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.97
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-9

ID#: 9403227A-20A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040524	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	15
Acetaldehyde	75-07-0	Manual ID	7.0
2-Propenenitrile	107-13-1	83 %	8.9
Unknown Hydrocarbon	NA	NA	6.0
Unknown Dimethyl-undecane	NA	50 %	14

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-5

ID#: 9403227A-21A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040525	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-5

ID#: 9403227A-21A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040525	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94
Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	12
Tetrahydrofuran	109-99-9	Calibrated	10
Unknown	NA	NA	3.8

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-3

ID#: 9403227A-22A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040526	Date of Collection:	3/25/94
Dil. Factor:	1.6	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	Not Detected
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	Not Detected
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-3
ID#: 9403227A-22A**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040526	Date of Collection:	3/25/94
Dil. Factor:	1.6	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	10

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-35

ID#: 9403227A-23A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040527	Date of Collection:	3/25/94
Dil. Factor:	2.1	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	Not Detected
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	Not Detected
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-35

ID#: 9403227A-23A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040527	Date of Collection:	3/25/94
Dil. Factor:	2.1	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Ethanol	64-17-5	Calibrated	39
Acetone	67-64-1	Calibrated	11
2-Propanol	67-63-0	Calibrated	6.2
Unknown	NA	NA	7.3
Unknown	NA	NA	14

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-15

ID#: 9403227A-24A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

5040528

Date of Collection: 3/25/94

Dil. Factor:

1.4

Date of Analysis: 4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	2.0
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-15
ID#: 9403227A-24A**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040528	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	13
Tetrahydrofuran	109-99-9	Calibrated	8.9
2-Butanone	78-93-3	Calibrated	3.8
Unknown	NA	NA	6.3
Acetaldehyde	75-07-0	Manual ID	6.5
Isocyanomethane	593-75-9	Manual ID	4.6

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-15 Duplicate

ID#: 9403227A-24B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040605	Date of Collection:	3/25/94
Dil. Factor:	1.6	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	2.2
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	Not Detected
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	Not Detected
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-15 Duplicate
ID#: 9403227A-24B**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040605	Date of Collection:	3/25/94
Dil. Factor:	1.6	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	16
2-Butanone	78-93-3	Calibrated	4.7
Tetrahydrofuran	109-99-9	Calibrated	11
Acetaldehyde	75-07-0	53 %	9.3
Isocyanomethane	593-75-9	32 %	10
Unknown	NA	NA	4.1

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: SV-26

ID#: 9403227A-25A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040529	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	1.1
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: SV-26

ID#: 9403227A-25A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040529	Date of Collection:	3/25/94
Dil. Factor:	1.3	Date of Analysis:	4/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	7.7
2,6-Dimethylnonane	17302-28-2	56 %	6.0
Unknown Hydrocarbon	NA	NA	7.8
Unknown Cyclohexane	NA	NA	6.0
Unknown	NA	NA	12
Decahydronaphthalene	91-17-8	47 %	12
Unknown Hydrocarbon	NA	NA	9.0
Unknown	NA	NA	12
Unknown	NA	NA	8.2
1-Methylnaphthalene	90-12-0	35 %	6.9

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9403227A-26A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 5040517 **Date of Collection:** NA
Dil. Factor: 1.0 **Date of Analysis:** 4/5/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	91
Freon 114	0.50	91
Chloromethane	0.50	93
Vinyl Chloride	0.50	87
Bromomethane	0.50	99
Chloroethane	0.50	90
Freon 11	0.50	89
1,1-Dichloroethene	0.50	86
Freon 113	0.50	87
Methylene Chloride	0.50	91
1,1-Dichloroethane	0.50	94
cis-1,2-Dichloroethene	0.50	93
Chloroform	0.50	93
1,1,1-Trichloroethane	0.50	94
Carbon Tetrachloride	0.50	86
Benzene	0.50	100
1,2-Dichloroethane	0.50	93
Trichloroethene	0.50	89
1,2-Dichloropropane	0.50	92
cis-1,3-Dichloropropene	0.50	104
Toluene	0.50	102
trans-1,3-Dichloropropene	0.50	127
1,1,2-Trichloroethane	0.50	100
Tetrachloroethene	0.50	90
Ethylene Dibromide	0.50	100
Chlorobenzene	0.50	95
Ethyl Benzene	0.50	98
m,p-Xylene	0.50	103
o-Xylene	0.50	104
Styrene	0.50	96
1,1,2,2-Tetrachloroethane	0.50	97
1,3,5-Trimethylbenzene	0.50	105
1,2,4-Trimethylbenzene	0.50	104
1,3-Dichlorobenzene	0.50	99
1,4-Dichlorobenzene	0.50	93
Chlorotoluene	0.50	94
1,2-Dichlorobenzene	0.50	94
1,2,4-Trichlorobenzene	0.50	96
Hexachlorobutadiene	0.50	91

AIR TOXICS LTD.

SAMPLE NAME: Method Spike
 ID#: 9403227A-26A

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040517	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/6/94
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Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040203	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 4/2/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403227A-27A**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040203	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/2/94
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Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octatluorotoluene	111	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040404	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank
 ID#: 9403227A-27B

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040404	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27C

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040504	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank
 ID#: 9403227A-27C

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040504	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27D

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040518	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403227A-27D**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name:	5040518	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27E

EPA METHOD TO-14 GC/MS Full Scan

File Name:	5040604	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank
 ID#: 9403227A-27E

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

File Name:	5040604	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	4/6/94
Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9403227A-27F

EPA METHOD TO-14 GC/MS Full Scan

File Name: 5040703 Date of Collection: NA
 Dil. Factor: 1.0 Date of Analysis: 4/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected

AIR TOXICS LTD.SAMPLE NAME: SV-1
ID#: 9403227B-13A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033023 **Date of Collection:** 3/24/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.46
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-31
ID#: 9403227B-14A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033024 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	17
Nitrogen	0.001	80
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	3.2
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-46
ID#: 9403227B-15A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033025 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	19
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	2.9
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-25**
ID#: 9403227B-16A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: NA **Date of Collection:** 3/25/94
Dil. Factor: 1.0 **Date of Analysis:** NA

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	Not Analyzed
Nitrogen	0.001	Not Analyzed
Carbon Monoxide	0.001	Not Analyzed
Methane	0.001	Not Analyzed
Carbon Dioxide	0.001	Not Analyzed
Total Non-Methane Hydrocarbons*	0.010	Not Analyzed
	Total (%)	NA

*Referenced to Propane

**Sample not analyzed per client's request.

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-6
ID#: 9403227B-17A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033026 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.48
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-19
ID#: 9403227B-18A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033027 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.82
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-EB
ID#: 9403227B-19A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033028 **Date of Collection:** 3/25/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.039
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-9
ID#: 9403227B-20A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033029 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.56
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-9 Duplicate
ID#: 9403227B-20B**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name:	3033030	Date of Collection:	3/25/94
Dil. Factor:	1.4	Date of Analysis:	3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.56
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-5
ID#: 9403227B-21A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033109 **Date of Collection:** 3/25/94
Dil. Factor: 1.3 **Date of Analysis:** 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.54
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-3
ID#: 9403227B-22A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033110 **Date of Collection:** 3/25/94
Dil. Factor: 1.6 **Date of Analysis:** 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	21
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	1.1
Total Non-Methane Hydrocarbons*	0.016	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-35
ID#: 9403227B-23A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033111 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	9.5
Nitrogen	0.001	84
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	6.7
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-15
ID#: 9403227B-24A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033112 **Date of Collection:** 3/25/94
Dil. Factor: 1.4 **Date of Analysis:** 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	20
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	1.3
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-26
ID#: 9403227B-25A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033113 **Date of Collection:** 3/25/94
Dil. Factor: 1.3 **Date of Analysis:** 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.71
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: Method Spike
ID#: 9403227B-26A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033001 Date of Collection: NA
Dil. Factor: 1.0 Date of Analysis: 3/30/94

Compound	Det. Limit (%)	% Recovery
Oxygen	0.001	98
Nitrogen	0.001	98
Carbon Monoxide	0.001	100
Methane	0.001	100
Carbon Dioxide	0.001	95
Total Non-Methane Hydrocarbons*	0.010	100

*Referenced to Propane

Container Type: NA

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403227B-27A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033002 **Date of Collection:** NA
Dil. Factor: 1.0 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	Not Detected
Nitrogen	0.001	100
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	Not Detected
Total Non-Methane Hydrocarbons*	0.010	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: NA

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403227B-27BAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3033104 Date of Collection: NA
Dil. Factor: 1.0 Date of Analysis: 3/31/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	Not Detected
Nitrogen	0.001	100
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	Not Detected
Total Non-Methane Hydrocarbons*	0.010	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: NA

Golder Associates
 4104 148th Avenue NE
 Redmond, WA 98052

Client Account Number: 17522
 Service Order #: 0000-2755
 PACE Project ID: D40331.305

Attn:
 Re: 933.1280.1500/Norseland-Kitsad

Report Date : April 29, 1994

Laboratory Sample #	Client Sample #	Volume/Time	Air Concentration				
Analyte	Det.Lim.	Unit	Main	Backup	Total	ppm	mg/M3
65-527879.0	SV-1	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527872.9	SV-10	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527873.2	SV-15	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527886.5	SV-19	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527891.4	SV-22	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527874.5	SV-25	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527877.4	SV-26	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527876.1	SV-3	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527883.6	SV-31	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527871.6	SV-35	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527880.7	SV-36	20.00	Liters				
n-butylamine	0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5

Golder Associates
 4104 148th Avenue NE
 Redmond, WA 98052

Client Account Number: 17522
 Service Order #: 0000-2755
 PACE Project ID: D40331.305

Attn:
 Re: 933.1280.1500/Norseland-Kitsad

Report Date : April 29, 1994

Laboratory <u>Sample #</u>	Client <u>Sample #</u>	Volume/Time			Air Concentration			
Analyte		<u>Det.Lim.</u>	<u>Unit</u>	<u>Main</u>	<u>Backup</u>	<u>Total</u>	<u>ppm</u>	<u>mg/M3</u>
65-527870.3	SV-42		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527881.0	SV-44		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527875.8	SV-45		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527885.2	SV-46		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527884.9	SV-47		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527888.1	SV-49		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527890.1	SV-5		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527889.4	SV-51		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527892.7	SV-5D		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527878.7	SV-6		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5
65-527882.3	SV-9		20.00	Liters				
n-butylamine		0.01	mg	LT 0.01	LT 0.01		LT 0.2	LT 0.5

Golder Associates
 4104 148th Avenue NE
 Redmond, WA 98052

Client Account Number: 17522
 Service Order #: 0000-2755
 PACE Project ID: D40331.305

Attn:
 Re: 933.1280.1500/Norseland-Kitsad

Report Date : April 29, 1994

Laboratory	Client	Sample #	Sample #	Volume/Time			Air Concentration				
				Det.	Lim.	Unit	Main	Backup	Total	ppm	mg/M3
65-527887.8	SV32			20.00 Liters							
n-butylamine		0.01		mg		LT 0.01		LT 0.01		LT 0.2	LT 0.5

**SOIL VAPOR AND SKIRT SAMPLING STUDY DATA
ANALYTICAL DATA**

MEMORANDUM

TO: Norseland Project File 933-1280

July 13, 1995

FR: S. Schildt *ASL*

RE: Validation of pkg. 9409275A, reissued 6/5/95

Method Spike recovery of chlorotoluene was less than the control limits. All chlorotoluene non-detect results are qualified as unusable (R).

The lab discovered that sample 04A had a leaky valve. All results for the sample are qualified as estimated. (J)

The original DV ~~10/94~~ ^{12/94} *Mitch*

Data validation for T014 SDG's (275A, 276A, 277A)
performed on 12/01/94 is superseded by the
attached.

*MM
9/02/22*

AIR TOXICS LTD.

SAMPLE NAME: Field Blank

ID#: 9409275A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100305	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.26
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	3.1
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	5.1
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.77
m,p-Xylene	0.70	2.8
o-Xylene	0.70	1.0
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.94
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SOIL

ID#: 9409275A-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100306	Date of Collection:	9/23/94
Dil. Factor:	4.0	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	2.0	Not Detected
Freon 114	2.0	Not Detected
Chloromethane	2.0	Not Detected
Vinyl Chloride	2.0	Not Detected
Bromomethane	2.0	Not Detected
Chloroethane	2.0	Not Detected
Freon 11	2.0	Not Detected
1,1-Dichloroethene	2.0	Not Detected
Freon 113	2.0	Not Detected
Methylene Chloride	2.0	Not Detected
1,1-Dichloroethane	2.0	Not Detected
cis-1,2-Dichloroethene	2.0	Not Detected
Chloroform	2.0	Not Detected
1,1,1-Trichloroethane	2.0	Not Detected
Carbon Tetrachloride	2.0	Not Detected
Benzene	2.0	7.3
1,2-Dichloroethane	2.0	Not Detected
Trichloroethene	2.0	Not Detected
1,2-Dichloropropane	2.0	Not Detected
cis-1,3-Dichloropropene	2.0	Not Detected
Toluene	2.0	12
trans-1,3-Dichloropropene	2.0	Not Detected
1,1,2-Trichloroethane	2.0	Not Detected
Tetrachloroethene	2.0	Not Detected
Ethylene Dibromide	2.0	Not Detected
Chlorobenzene	2.0	Not Detected
Ethyl Benzene	2.0	Not Detected
m,p-Xylene	2.0	5.8
o-Xylene	2.0	2.1
Styrene	2.0	Not Detected
1,1,2,2-Tetrachloroethane	2.0	Not Detected
1,3,5-Trimethylbenzene	2.0	Not Detected
1,2,4-Trimethylbenzene	2.0	Not Detected
1,3-Dichlorobenzene	2.0	Not Detected
1,4-Dichlorobenzene	2.0	Not Detected
Chlorotoluene	2.0	Not Detected
1,2-Dichlorobenzene	2.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected
Hexachlorobutadiene	2.0	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SKIRT

ID#: 9409275A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100307	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.70
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.16
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	4.4
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	1.2
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	6.3
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.88
m,p-Xylene	0.70	3.3
o-Xylene	0.70	1.3
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.99
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SOIL

ID#: 9409275A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100314	Date of Collection:	9/23/94
Dil. Factor:	2.2	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)	
Freon 12	1.1	Not Detected	uJ
Freon 114	1.1	Not Detected	
Chloromethane	1.1	Not Detected	
Vinyl Chloride	1.1	Not Detected	
Bromomethane	1.1	Not Detected	
Chloroethane	1.1	Not Detected	
Freon 11	1.1	Not Detected	
1,1-Dichloroethene	1.1	Not Detected	
Freon 113	1.1	Not Detected	
Methylene Chloride	1.1	Not Detected	
1,1-Dichloroethane	1.1	Not Detected	
cis-1,2-Dichloroethene	1.1	Not Detected	
Chloroform	1.1	Not Detected	
1,1,1-Trichloroethane	1.1	Not Detected	
Carbon Tetrachloride	1.1	Not Detected	
Benzene	1.1	3.2	J
1,2-Dichloroethane	1.1	Not Detected	uJ
Trichloroethene	1.1	Not Detected	
1,2-Dichloropropane	1.1	Not Detected	
cis-1,3-Dichloropropene	1.1	Not Detected	
Toluene	1.1	5.4	J
trans-1,3-Dichloropropene	1.1	Not Detected	uJ
1,1,2-Trichloroethane	1.1	Not Detected	
Tetrachloroethene	1.1	Not Detected	
Ethylene Dibromide	1.1	Not Detected	
Chlorobenzene	1.1	Not Detected	
Ethyl Benzene	1.1	Not Detected	
m,p-Xylene	1.1	3.4	J
o-Xylene	1.1	1.5	J
Styrene	1.1	Not Detected	uJ
1,1,2,2-Tetrachloroethane	1.1	Not Detected	
1,3,5-Trimethylbenzene	1.1	Not Detected	J
1,2,4-Trimethylbenzene	1.1	1.3	J
1,3-Dichlorobenzene	1.1	Not Detected	uJ
1,4-Dichlorobenzene	1.1	Not Detected	uJ
Chlorotoluene	1.1	Not Detected	R
1,2-Dichlorobenzene	1.1	Not Detected	uJ
1,2,4-Trichlorobenzene	1.1	Not Detected	
Hexachlorobutadiene	1.1	Not Detected	J

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SKIRT

ID#: 9409275A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100308	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.22
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	Not Detected
1,1-Dichloroethane	0.28	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	3.8
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	7.0
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.0
m,p-Xylene	0.70	3.8
o-Xylene	0.70	1.4
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.2
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	110	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SOIL

ID#: 9409275A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100309	Date of Collection:	9/23/94
Dil. Factor:	2.2	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	2.3
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	4.3
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	2.0
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SKIRT

ID#: 9409275A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100310	Date of Collection: 9/23/94
Dil. Factor:	1.5	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.15	0.21
Vinyl Chloride	0.15	Not Detected
Bromomethane	0.21	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.21	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.18	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.15	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.24	Not Detected
Benzene	0.75	3.6
1,2-Dichloroethane	0.18	Not Detected
Trichloroethene	0.15	Not Detected
1,2-Dichloropropane	0.15	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected
Toluene	0.75	6.5
trans-1,3-Dichloropropene	0.18	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected
Tetrachloroethene	0.15	Not Detected
Ethylene Dibromide	0.15	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	0.95
m,p-Xylene	0.75	3.5
o-Xylene	0.75	1.3
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	1.2
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected R
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.24	Not Detected
Hexachlorobutadiene	0.15	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.SAMPLE NAME: Lab Blank
ID#: 9403227A-27F**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

File Name: 5040703 Date of Collection: NA
Dil. Factor: 1.0 Date of Analysis: 4/7/94

Compound	CAS Number	Match Quality	Amount (ppbv)
None Identified			

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

CHAIN OF CUSTODY RECORD

AIR TOXICS LTD.SAMPLE NAME: SV-45
ID#: 9403227B-02A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033011 **Date of Collection:** 3/24/94
Dil. Factor: 1.5 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	21
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.74
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-42
ID#: 9403227B-03A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033012 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	19
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	2.3
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-42D
ID#: 9403227B-04A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033013 **Date of Collection:** 3/24/94
Dil. Factor: 1.5 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	19
Nitrogen	0.002	79
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	2.2
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-22
ID#: 9403227B-05A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID**File Name:** 3033014 **Date of Collection:** 3/24/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	7.5
Nitrogen	0.001	84
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	8.8
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-10
ID#: 9403227B-06A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033015 **Date of Collection:** 3/24/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	1.5
Nitrogen	0.001	90
Carbon Monoxide	0.001	Not Detected
Methane	0.001	2.2
Carbon Dioxide	0.001	5.8
Total Non-Methane Hydrocarbons*	0.013	0.016
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-32
ID#: 9403227B-07A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033016 **Date of Collection:** 3/24/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	17
Nitrogen	0.001	81
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	2.4
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-32D
ID#: 9403227B-08A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033017 **Date of Collection:** 3/24/94
Dil. Factor: 1.3 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	17
Nitrogen	0.001	80
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	2.5
Total Non-Methane Hydrocarbons*	0.013	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-44
ID#: 9403227B-09A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033018 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.31
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-49
ID#: 9403227B-10A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033019 **Date of Collection:** 3/24/94
Dil. Factor: 1.8 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	14
Nitrogen	0.002	81
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	4.5
Total Non-Methane Hydrocarbons*	0.018	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-49 Duplicate
ID#: 9403227B-10B**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033020 **Date of Collection:** 3/24/94
Dil. Factor: 1.8 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	14
Nitrogen	0.002	82
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	4.4
Total Non-Methane Hydrocarbons*	0.018	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-47
ID#: 9403227B-11A**Atmospheric Gases by Modified ASTM D-3416**
GC/TCD/FID

File Name: 3033021 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	20
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	1.5
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: SV-36
ID#: 9403227B-12A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID****File Name:** 3033022 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	14
Nitrogen	0.001	83
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	3.1
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SKIRT Duplicate
 ID#: 9409275A-07B
EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100311	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.15	0.23
Vinyl Chloride	0.15	Not Detected
Bromomethane	0.21	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.21	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.18	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.15	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.24	Not Detected
Benzene	0.75	3.3
1,2-Dichloroethane	0.18	Not Detected
Trichloroethene	0.15	Not Detected
1,2-Dichloropropane	0.15	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected
Toluene	0.75	6.4
trans-1,3-Dichloropropene	0.18	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected
Tetrachloroethene	0.15	Not Detected
Ethylene Dibromide	0.15	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	1.0
m,p-Xylene	0.75	3.7
o-Xylene	0.75	1.4
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	1.2
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.24	Not Detected
Hexachlorobutadiene	0.15	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SOIL

ID#: 9409275A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100419	Date of Collection:	9/23/94
Dil. Factor:	11	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	5.5	Not Detected
Freon 114	5.5	Not Detected
Chloromethane	5.5	Not Detected
Vinyl Chloride	5.5	Not Detected
Bromomethane	5.5	Not Detected
Chloroethane	5.5	Not Detected
Freon 11	5.5	Not Detected
1,1-Dichloroethene	5.5	Not Detected
Freon 113	5.5	Not Detected
Methylene Chloride	5.5	Not Detected
1,1-Dichloroethane	5.5	Not Detected
cis-1,2-Dichloroethene	5.5	Not Detected
Chloroform	5.5	Not Detected
1,1,1-Trichloroethane	5.5	Not Detected
Carbon Tetrachloride	5.5	Not Detected
Benzene	5.5	15
1,2-Dichloroethane	5.5	Not Detected
Trichloroethene	5.5	Not Detected
1,2-Dichloropropane	5.5	Not Detected
cis-1,3-Dichloropropene	5.5	Not Detected
Toluene	5.5	Not Detected
trans-1,3-Dichloropropene	5.5	Not Detected
1,1,2-Trichloroethane	5.5	Not Detected
Tetrachloroethene	5.5	Not Detected
Ethylene Dibromide	5.5	Not Detected
Chlorobenzene	5.5	Not Detected
Ethyl Benzene	5.5	Not Detected
m,p-Xylene	5.5	Not Detected
o-Xylene	5.5	Not Detected
Styrene	5.5	Not Detected
1,1,2,2-Tetrachloroethane	5.5	Not Detected
1,3,5-Trimethylbenzene	5.5	Not Detected
1,2,4-Trimethylbenzene	5.5	Not Detected
1,3-Dichlorobenzene	5.5	Not Detected
1,4-Dichlorobenzene	5.5	Not Detected
Chlorotoluene	5.5	Not Detected R
1,2-Dichlorobenzene	5.5	Not Detected
1,2,4-Trichlorobenzene	5.5	Not Detected
Hexachlorobutadiene	5.5	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SKIRT

ID#: 9409275A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100312	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.31
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	0.23
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	3.1
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	4.5
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.71
m,p-Xylene	0.70	2.6
o-Xylene	0.70	1.0
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.89
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SOIL

ID#: 9409275A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100313	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	0.75
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SKIRT

ID#: 9409275A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100315	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.26
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	2.5
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	3.6
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	2.4
o-Xylene	0.70	0.94
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SOIL

ID#: 9409275A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100416	Date of Collection:	9/23/94
Dil. Factor:	1.6	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	1.3
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	2.6
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	0.98
o-Xylene	0.80	Not Detected
Styrene	0.80	0.81
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SOIL Duplicate

ID#: 9409275A-12B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100417	Date of Collection:	9/23/94
Dil. Factor:	1.6	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	1.4
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	2.5
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	0.98
o-Xylene	0.80	Not Detected
Styrene	0.80	0.79
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SKIRT

ID#: 9409275A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100418	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.24
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	1.6
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	2.4
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.2
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromo fluoro benzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SOIL

ID#: 9409275A-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100405	Date of Collection:	9/23/94
Dil. Factor:	1.3	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	125	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SKIRT

ID#: 9409275A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100406	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.14	0.41
Vinyl Chloride	0.14	Not Detected
Bromomethane	0.20	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.20	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.17	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.14	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.22	Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.17	Not Detected
Trichloroethene	0.14	Not Detected
1,2-Dichloropropane	0.14	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected
Toluene	0.70	1.6
trans-1,3-Dichloropropene	0.17	Not Detected
1,1,2-Trichloroethane	0.14	Not Detected
Tetrachloroethene	0.14	Not Detected
Ethylene Dibromide	0.14	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.96
o-Xylene	0.70	Not Detected
Styrene	0.70	0.70
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.22	Not Detected
Hexachlorobutadiene	0.14	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limite
Octafluorotoluene	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

CHAIN OF CUSTODY RECORD

PROJ. NO.	SITE / LOCATION
433-1280	Norsekind / Bremerton, WA
SAMPLERS: (Signature)	Ginger C. Wren

AIR TOXICS LTD.SAMPLE NAME: SV-51
ID#: 9403227B-01A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3033010 **Date of Collection:** 3/24/94
Dil. Factor: 1.4 **Date of Analysis:** 3/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	20
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.76
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SKIRT

ID#: 9409276A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100424	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.23	Not Detected
Vinyl Chloride	0.23	Not Detected
Bromomethane	0.32	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.32	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.27	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.23	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.36	Not Detected
Benzene	0.75	0.81
1,2-Dichloroethane	0.27	Not Detected
Trichloroethene	0.23	Not Detected
1,2-Dichloropropane	0.23	Not Detected
cis-1,3-Dichloropropene	0.32	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.27	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected
Tetrachloroethene	0.23	Not Detected
Ethylene Dibromide	0.23	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.36	Not Detected
Hexachlorobutadiene	0.23	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SOIL

ID#: 9409276A-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100426	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	1.5
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	4.0
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SKIRT

ID#: 9409276A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100426	Date of Collection:	9/23/94
Dil. Factor:	1.6	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.24	Not Detected
Vinyl Chloride	0.24	Not Detected
Bromomethane	0.34	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.34	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.29	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.24	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.38	Not Detected
Benzene	0.80	0.91
1,2-Dichloroethane	0.29	Not Detected
Trichloroethene	0.24	Not Detected
1,2-Dichloropropane	0.24	Not Detected
cis-1,3-Dichloropropene	0.34	Not Detected
Toluene	0.80	1.5
trans-1,3-Dichloropropene	0.29	Not Detected
1,1,2-Trichloroethane	0.24	Not Detected
Tetrachloroethene	0.24	Not Detected
Ethylene Dibromide	0.24	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.38	Not Detected
Hexachlorobutadiene	0.24	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SOIL

ID#: 9409276A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100427	Date of Collection:	9/23/94
Dil. Factor:	1.8	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.90	Not Detected
Freon 114	0.90	Not Detected
Chloromethane	0.90	Not Detected
Vinyl Chloride	0.90	Not Detected
Bromomethane	0.90	Not Detected
Chloroethane	0.90	Not Detected
Freon 11	0.90	Not Detected
1,1-Dichloroethene	0.90	Not Detected
Freon 113	0.90	Not Detected
Methylene Chloride	0.90	Not Detected
1,1-Dichloroethane	0.90	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected
Chloroform	0.90	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected
Carbon Tetrachloride	0.90	Not Detected
Benzene	0.90	1.8
1,2-Dichloroethane	0.90	Not Detected
Trichloroethene	0.90	Not Detected
1,2-Dichloropropane	0.90	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected
Toluene	0.90	8.2
trans-1,3-Dichloropropene	0.90	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected
Tetrachloroethene	0.90	Not Detected
Ethylene Dibromide	0.90	Not Detected
Chlorobenzene	0.90	Not Detected
Ethyl Benzene	0.90	1.9
m,p-Xylene	0.90	8.0
o-Xylene	0.90	3.3
Styrene	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected
1,2,4-Trimethylbenzene	0.90	2.8
1,3-Dichlorobenzene	0.90	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected
Chlorotoluene	0.90	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected
Hexachlorobutadiene	0.90	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SKIRT

ID#: 9409276A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100428	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.23	Not Detected
Vinyl Chloride	0.23	Not Detected
Bromomethane	0.32	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.32	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.27	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.23	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.36	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.27	Not Detected
Trichloroethene	0.23	Not Detected
1,2-Dichloropropane	0.23	Not Detected
cis-1,3-Dichloropropene	0.32	Not Detected
Toluene	0.75	1.3
trans-1,3-Dichloropropene	0.27	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected
Tetrachloroethene	0.23	Not Detected
Ethylene Dibromide	0.23	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.4
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.36	Not Detected
Hexachlorobutadiene	0.23	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SOIL

ID#: 9409276A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100429	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SKIRT

ID#: 9409276A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100513	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.25
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	0.90
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.3
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SOIL

ID#: 9409276A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100514	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	1.0
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	2.2
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.3
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SKIRT

ID#: 9409276A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100516	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	1.2
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.38
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	1.7
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.2
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	117	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SOIL

ID#: 9409276A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100516	Date of Collection:	9/23/94
Dil. Factor:	1.3	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	111	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SKIRT

ID#: 9409276A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100605	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.23	0.42
Vinyl Chloride	0.23	Not Detected
Bromomethane	0.32	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.32	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.27	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.23	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.36	Not Detected
Benzene	0.75	1.7
1,2-Dichloroethane	0.27	Not Detected
Trichloroethene	0.23	Not Detected
1,2-Dichloropropane	0.23	Not Detected
cis-1,3-Dichloropropene	0.32	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.27	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected
Tetrachloroethene	0.23	Not Detected
Ethylene Dibromide	0.23	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.36	Not Detected
Hexachlorobutadiene	0.23	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SKIRT Duplicate

ID#: 9409276A-11B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100606	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.23	0.50
Vinyl Chloride	0.23	Not Detected
Bromomethane	0.32	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.32	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.27	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.23	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.36	Not Detected
Benzene	0.75	1.7
1,2-Dichloroethane	0.27	Not Detected
Trichloroethene	0.23	Not Detected
1,2-Dichloropropane	0.23	Not Detected
cis-1,3-Dichloropropene	0.32	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.27	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected
Tetrachloroethene	0.23	Not Detected
Ethylene Dibromide	0.23	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.36	Not Detected
Hexachlorobutadiene	0.23	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	95	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SOIL

ID#: 9409276A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100607	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SKIRT

ID#: 9409276A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100608	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.40
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	1.8
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.4
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.70
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SOIL

ID#: 9409276A-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100609	Date of Collection: 9/23/94
Dil. Factor:	2.3	Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.2	Not Detected
Freon 114	1.2	Not Detected
Chloromethane	1.2	Not Detected
Vinyl Chloride	1.2	Not Detected
Bromomethane	1.2	Not Detected
Chloroethane	1.2	Not Detected
Freon 11	1.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected
Freon 113	1.2	Not Detected
Methylene Chloride	1.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected
Chloroform	1.2	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected
Benzene	1.2	1.2
1,2-Dichloroethane	1.2	Not Detected
Trichloroethene	1.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected
Toluene	1.2	4.1
trans-1,3-Dichloropropene	1.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected
Tetrachloroethene	1.2	Not Detected
Ethylene Dibromide	1.2	Not Detected
Chlorobenzene	1.2	Not Detected
Ethyl Benzene	1.2	Not Detected
m,p-Xylene	1.2	1.1
o-Xylene	1.2	Not Detected
Styrene	1.2	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected
Chlorotoluene	1.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected
Hexachlorobutadiene	1.2	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SKIRT

ID#: 9409276A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100610	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.31
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	0.98
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	0.72
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.0
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SOIL

ID#: 9409276A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100611	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	1.4
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	8.9
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	17
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	2.2
m,p-Xylene	0.70	7.6
o-Xylene	0.70	2.7
Styrene	0.70	0.96
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.7
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SKIRT

ID#: 9409276A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100705	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.3
Freon 114	0.70	Not Detected
Chloromethane	0.21	Not Detected
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	3.6
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	7.2
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.2
m,p-Xylene	0.70	3.8
o-Xylene	0.70	1.4
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.1
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SKIRT Duplicate
 ID#: 9409276A-17B
EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100706	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.4
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.23
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	3.4
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	7.2
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.1
m,p-Xylene	0.70	3.7
o-Xylene	0.70	1.2
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.99
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SOIL

ID#: 9409276A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100708	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.76
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.0
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	126	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SKIRT

ID#: 9409276A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100613	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.21	0.25
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	0.31 <i>B u</i>
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.8
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.88
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

B=Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SOIL

ID#: 9409276A-20A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100709	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9409276A-21A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100503	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	100
Freon 114	0.50	103
Chloromethane	0.50	119
Vinyl Chloride	0.50	113
Bromomethane	0.50	112
Chloroethane	0.50	107
Freon 11	0.50	99
1,1-Dichloroethene	0.50	104
Freon 113	0.50	105
Methylene Chloride	0.50	130
1,1-Dichloroethane	0.50	121
cis-1,2-Dichloroethene	0.50	100
Chloroform	0.50	98
1,1,1-Trichloroethane	0.50	104
Carbon Tetrachloride	0.50	69 Q
Benzene	0.50	99
1,2-Dichloroethane	0.50	104
Trichloroethene	0.50	88
1,2-Dichloropropane	0.50	111
cis-1,3-Dichloropropene	0.50	101
Toluene	0.50	105
trans-1,3-Dichloropropene	0.50	92
1,1,2-Trichloroethane	0.50	118
Tetrachloroethene	0.50	89
Ethylene Dibromide	0.50	116
Chlorobenzene	0.50	106
Ethyl Benzene	0.50	109
m,p-Xylene	0.50	110
o-Xylene	0.50	107
Styrene	0.50	99
1,1,2,2-Tetrachloroethane	0.50	115
1,3,5-Trimethylbenzene	0.50	110
1,2,4-Trimethylbenzene	0.50	107
1,3-Dichlorobenzene	0.50	102
1,4-Dichlorobenzene	0.50	104
Chlorotoluene	0.50	83
1,2-Dichlorobenzene	0.50	102
1,2,4-Trichlorobenzene	0.50	97
Hexachlorobutadiene	0.50	91

Q = Exceeds Quality Control limits of 70% to 130%.

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	95	70-130
Toluene-d8	102	70-130
4-Bromo fluoro benzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409276A-22A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100423	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	Not Detected
Hexachlorobutadiene	0.050	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409276A-22B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100508	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	Not Detected
Hexachlorobutadiene	0.050	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	88	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409276A-22C

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100604	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	0.090
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	Not Detected
Hexachlorobutadiene	0.050	Not Detected

Container Type:

Surrogates	% Recovery	Method Limits
Octafluorotoluene	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409276A-22D

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100704	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	0.12
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	0.080
Hexachlorobutadiene	0.050	0.050

Container Type:

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

MEMORANDUM

TO: Norseland Project File 933-1280

July 13, 1995

FR: S. Schildt *SKS*

RE: Validation of pkg. 9409277A, reissued 6/5/95

1,2,4-Trichlorobenzene was detected in the laboratory blank. The 1,2,4-trichlorobenzene result for sample 09A was qualified as a non-detect (U).

See original DV 10/94 12/94

*Data Validation for TO 14 SDG's (275A, 276A, 277A)
performed on 12/01/94 is superceded
by the attached*

12/01/94 12/94

12/01/94 12/94

AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SKIRT

ID#: 9409277A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100307 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.83
Freon 114	0.75	Not Detected
Chloromethane	0.38	Not Detected
Vinyl Chloride	0.19	Not Detected
Bromomethane	0.19	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.19	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.19	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.19	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.19	Not Detected
Benzene	0.75	0.88
1,2-Dichloroethane	0.26	Not Detected
Trichloroethene	0.19	Not Detected
1,2-Dichloropropane	0.19	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected
Toluene	0.75	1.6
trans-1,3-Dichloropropene	0.26	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected
Tetrachloroethene	0.19	Not Detected
Ethylene Dibromide	0.19	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.0
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.26	Not Detected
Hexachlorobutadiene	0.30	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	82	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	90	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SOIL
 ID#: 9409277A-02A
EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100308	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.86
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SKIRT

ID#: 9409277A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100309	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.92
Freon 114	0.70	Not Detected
Chloromethane	0.35	Not Detected
Vinyl Chloride	0.18	Not Detected
Bromomethane	0.18	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	0.74
1,1-Dichloroethene	0.18	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.18	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.18	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.18	0.19
Benzene	0.70	1.0
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.18	Not Detected
1,2-Dichloropropane	0.18	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected
Toluene	0.70	3.1
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected
Tetrachloroethene	0.18	Not Detected
Ethylene Dibromide	0.18	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.5
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.25	Not Detected
Hexachlorobutadiene	0.28	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Ocfluorotoluene	90	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	79	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SOIL

ID#: 9409277A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100310 **Date of Collection:** 9/23/94
Dil. Factor: 1.8 **Date of Analysis:** 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.90	Not Detected
Freon 114	0.90	Not Detected
Chloromethane	0.90	Not Detected
Vinyl Chloride	0.90	Not Detected
Bromomethane	0.90	Not Detected
Chloroethane	0.90	Not Detected
Freon 11	0.90	Not Detected
1,1-Dichloroethene	0.90	Not Detected
Freon 113	0.90	Not Detected
Methylene Chloride	0.90	Not Detected
1,1-Dichloroethane	0.90	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected
Chloroform	0.90	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected
Carbon Tetrachloride	0.90	Not Detected
Benzene	0.90	Not Detected
1,2-Dichloroethane	0.90	Not Detected
Trichloroethene	0.90	Not Detected
1,2-Dichloropropane	0.90	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected
Toluene	0.90	2.0
trans-1,3-Dichloropropene	0.90	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected
Tetrachloroethene	0.90	Not Detected
Ethylene Dibromide	0.90	Not Detected
Chlorobenzene	0.90	Not Detected
Ethyl Benzene	0.90	Not Detected
m,p-Xylene	0.90	0.90
o-Xylene	0.90	Not Detected
Styrene	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected
1,2,4-Trimethylbenzene	0.90	Not Detected
1,3-Dichlorobenzene	0.90	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected
Chlorotoluene	0.90	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected
Hexachlorobutadiene	0.90	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SKIRT

ID#: 9409277A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100311	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.85
Freon 114	0.75	Not Detected
Chloromethane	0.38	Not Detected
Vinyl Chloride	0.19	Not Detected
Bromomethane	0.19	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.19	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.19	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.19	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.19	0.19
Benzene	0.75	1.2
1,2-Dichloroethane	0.26	Not Detected
Trichloroethene	0.19	Not Detected
1,2-Dichloropropane	0.19	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected
Toluene	0.75	2.3
trans-1,3-Dichloropropene	0.26	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected
Tetrachloroethene	0.19	Not Detected
Ethylene Dibromide	0.19	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.3
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.26	Not Detected
Hexachlorobutadiene	0.30	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	122	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SOIL

ID#: 9409277A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100312	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	71	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SKIRT

ID#: 9409277A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

7100313

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.84
Freon 114	0.75	Not Detected
Chloromethane	0.38	Not Detected
Vinyl Chloride	0.19	Not Detected
Bromomethane	0.19	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	0.80
1,1-Dichloroethene	0.19	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.19	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.19	Not Detected
1,1,1-Trichloroethane	0.75	2.2
Carbon Tetrachloride	0.19	0.19
Benzene	0.75	1.4
1,2-Dichloroethane	0.26	Not Detected
Trichloroethene	0.19	Not Detected
1,2-Dichloropropane	0.19	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected
Toluene	0.75	3.1
trans-1,3-Dichloropropene	0.26	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected
Tetrachloroethene	0.19	Not Detected
Ethylene Dibromide	0.19	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.4
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.26	Not Detected
Hexachlorobutadiene	0.30	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	71	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SOIL

ID#: 9409277A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100407	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.57 J
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.69 J
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	1.4
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.3
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

J = Value reported less than the detection limit. Confirmed by duplicate analysis.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	68	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SOIL Duplicate

ID#: 9409277A-08B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100409	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.71
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.72
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.4
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	1.6
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.6
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	75	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SKIRT

ID#: 9409277A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100408	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.74
Freon 114	0.70	Not Detected
Chloromethane	0.35	Not Detected
Vinyl Chloride	0.18	Not Detected
Bromomethane	0.18	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.18	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.18	0.40
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.18	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.18	0.19
Benzene	0.70	0.97
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.18	Not Detected
1,2-Dichloropropane	0.18	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected
Toluene	0.70	1.7
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected
Tetrachloroethene	0.18	Not Detected
Ethylene Dibromide	0.18	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.96
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.25	0.30 B
Hexachlorobutadiene	0.28	Not Detected

B=Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SOIL

ID#: 9409277A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100410 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.85
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.1
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.1
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	85	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	73	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SKIRT

ID#: 9409277A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100411	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.1
Freon 114	0.70	Not Detected
Chloromethane	0.35	Not Detected
Vinyl Chloride	0.18	Not Detected
Bromomethane	0.18	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	1.3
1,1-Dichloroethene	0.18	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.18	0.33
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.18	0.52
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.18	Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.18	Not Detected
1,2-Dichloropropane	0.18	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected
Toluene	0.70	3.5
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected
Tetrachloroethene	0.18	Not Detected
Ethylene Dibromide	0.18	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.7
o-Xylene	0.70	0.72
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.25	Not Detected
Hexachlorobutadiene	0.28	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	93	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	82	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SOIL
 ID#: 9409277A-12A
EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100412 **Date of Collection:** 9/23/94
Dil. Factor: 2.1 **Date of Analysis:** 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	1.1
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	2.7
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	1.1
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SOIL Duplicate

ID#: 9409277A-12B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100413	Date of Collection:	9/23/94
Dil. Factor:	2.1	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	1.0 J
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	2.7
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	1.1
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

J = Value reported less than the detection limit. Confirmed by duplicate analysis.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SKIRT

ID#: 9409277A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

7100414

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.75
Freon 114	0.75	Not Detected
Chloromethane	0.38	Not Detected
Vinyl Chloride	0.19	Not Detected
Bromomethane	0.19	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.19	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.19	0.27
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.19	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.19	Not Detected
Benzene	0.75	1.2
1,2-Dichloroethane	0.26	Not Detected
Trichloroethene	0.19	Not Detected
1,2-Dichloropropane	0.19	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected
Toluene	0.75	2.1
trans-1,3-Dichloropropene	0.26	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected
Tetrachloroethene	0.19	Not Detected
Ethylene Dibromide	0.19	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.0
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.26	Not Detected
Hexachlorobutadiene	0.30	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SOIL

ID#: 9409277A-14A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100505	Date of Collection:	9/23/94
Dil. Factor:	2.4	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.2	Not Detected
Freon 114	1.2	Not Detected
Chloromethane	1.2	Not Detected
Vinyl Chloride	1.2	Not Detected
Bromomethane	1.2	Not Detected
Chloroethane	1.2	Not Detected
Freon 11	1.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected
Freon 113	1.2	Not Detected
Methylene Chloride	1.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected
Chloroform	1.2	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected
Benzene	1.2	Not Detected
1,2-Dichloroethane	1.2	Not Detected
Trichloroethene	1.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected
Toluene	1.2	1.7
trans-1,3-Dichloropropene	1.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected
Tetrachloroethene	1.2	22
Ethylene Dibromide	1.2	Not Detected
Chlorobenzene	1.2	Not Detected
Ethyl Benzene	1.2	Not Detected
m,p-Xylene	1.2	Not Detected
o-Xylene	1.2	Not Detected
Styrene	1.2	Not Detected
1,1,2-Tetrachloroethane	1.2	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected
Chlorotoluene	1.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected
Hexachlorobutadiene	1.2	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	82	70-130
Toluene-d8	128	70-130
4-Bromofluorobenzene	72	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SKIRT

ID#: 9409277A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100506	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.38	Not Detected
Vinyl Chloride	0.19	Not Detected
Bromomethane	0.19	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.19	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.19	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.19	Not Detected
1,1,1-Trichloroethane	0.75	0.95
Carbon Tetrachloride	0.19	0.20
Benzene	0.75	0.97
1,2-Dichloroethane	0.26	Not Detected
Trichloroethene	0.19	Not Detected
1,2-Dichloropropane	0.19	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected
Toluene	0.75	2.3
trans-1,3-Dichloropropene	0.26	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected
Tetrachloroethene	0.19	Not Detected
Ethylene Dibromide	0.19	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.7
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.26	Not Detected
Hexachlorobutadiene	0.30	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	130	70-130
4-Bromofluorobenzene	74	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SOIL

ID#: 9409277A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100508	Date of Collection:	9/23/94
Dil. Factor:	2.1	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	Not Detected
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	3.8
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	Not Detected
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	80	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SKIRT

ID#: 9409277A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100509	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.76
Freon 114	0.70	Not Detected
Chloromethane	0.35	Not Detected
Vinyl Chloride	0.18	Not Detected
Bromomethane	0.18	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.18	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.18	0.24
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.18	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.18	Not Detected
Benzene	0.70	2.6
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.18	Not Detected
1,2-Dichloropropane	0.18	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected
Toluene	0.70	2.2
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected
Tetrachloroethene	0.18	Not Detected
Ethylene Dibromide	0.18	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.86
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlortoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.25	Not Detected
Hexachlorobutadiene	0.28	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	83	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	74	70-130

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9409277A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100402 **Date of Collection:** NA
Dil. Factor: 1.0 **Date of Analysis:** 10/4/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	89
Freon 114	0.50	91
Chloromethane	0.50	92
Vinyl Chloride	0.50	94
Bromomethane	0.50	93
Chloroethane	0.50	92
Freon 11	0.50	85
1,1-Dichloroethene	0.50	91
Freon 113	0.50	89
Methylene Chloride	0.50	89
1,1-Dichloroethane	0.50	91
cis-1,2-Dichloroethene	0.50	87
Chloroform	0.50	89
1,1,1-Trichloroethane	0.50	94
Carbon Tetrachloride	0.50	83
Benzene	0.50	86
1,2-Dichloroethane	0.50	91
Trichloroethene	0.50	85
1,2-Dichloropropane	0.50	89
cis-1,3-Dichloropropene	0.50	83
Toluene	0.50	89
trans-1,3-Dichloropropene	0.50	79
1,1,2-Trichloroethane	0.50	96
Tetrachloroethene	0.50	96
Ethylene Dibromide	0.50	96
Chlorobenzene	0.50	94
Ethyl Benzene	0.50	94
m,p-Xylene	0.50	94
o-Xylene	0.50	91
Styrene	0.50	85
1,1,2,2-Tetrachloroethane	0.50	92
1,3,5-Trimethylbenzene	0.50	93
1,2,4-Trimethylbenzene	0.50	96
1,3-Dichlorobenzene	0.50	90
1,4-Dichlorobenzene	0.50	86
Chlorotoluene	0.50	96
1,2-Dichlorobenzene	0.50	85
1,2,4-Trichlorobenzene	0.50	73
Hexachlorobutadiene	0.50	91

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	87	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	113	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100304	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.10	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.050	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.050	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.050	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.050	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.070	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.050	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.070	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.070	0.16
Hexachlorobutadiene	0.080	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	116	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277A-19B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100404	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.10	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.050	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.050	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.050	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.050	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.070	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.050	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.070	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.070	0.40
Hexachlorobutadiene	0.080	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	81	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277A-19C

EPA METHOD TO-14 GC/MS Full Scan

File Name:	7100504	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.10	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.050	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.050	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.050	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.050	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.070	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.050	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.070	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.070	0.14
Hexachlorobutadiene	0.080	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	73	70-130

FILE COPY - 1/2 CORRECTION
FOR FIELD BLANK.
FINAL DOC.

MEMORANDUM

TO: File, 933-1280-1703, Norseland Mobile Estates

December 1, 1994

FR: M. Higgins

RE: Mobile Home Skirt and Soil Gas Data - Sampled 09/23/93

INTRODUCTION

This memorandum presents the results of data validation and review of air sampling at twenty-eight mobile home locations listed in Table 1. Soil gas probes 1.5 meters in length were installed angled beneath each home to depth of approximately 1 meter below ground surface using procedures described in Golder's Technical Procedure 2.2-4, *Sampling and Analysis of Soil Gases*. In addition, undisturbed air samples from the crawl space beneath each mobile home were sampled. All samples were collected in 6 liter SUMMA® canister and analyzed for volatile organic compounds (VOCs) and fixed gases (oxygen, nitrogen, carbon monoxide, carbon dioxide, total non-methane hydrocarbons) by Air Toxics LTD., Folsom, California.

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced method specified in Table 2. Attachments 1 through 5 provide the following information as indicated below:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

Precision. Goals for precision were met. Duplicate analyses were provided for each analytical method. All target analytes were reproduced within acceptable limits.

Accuracy. Goals for accuracy were not met for chlorotoluene and carbontetrachloride. Table 3 presents a summary of data qualifications applied.

Method Blank: Goals for contaminant free blanks were met for all analyses. A method blank was prepared for each batch of analyses for each analytical method.

Field Blank: Goals for contaminant free field blanks were not met for all VOC parameters. A field blank consisting of ambient air was collected on-site prior to field sampling. Trace levels of target compounds were detected in the field blank, however no qualifications were applied based on field blank results.

Detection Limits. Detection limit goals were met for all analyses.

Data Completeness: The data package was 96 percent complete for all requested analyses. A total of fifty-seven samples were validated in this data package with a total of 2,223 determinations reported, 2,176 which were deemed valid.

SUMMARY

The data can be used with consideration of the following:

- Field samples have trace levels of benzene, toluene, ethyl benzene, total xylenes, and 1,2,4- trimethylbenzene which are similar to the levels found in the field blank (the apparent background level at the study area). The significance of these analytes detected in field samples should be considered in light of the field blank results.
- The soil gas sample for Lot # 60 had a leaky valve discovered during laboratory analysis. It is not believed to have had a significant impact on the data, however positive results have been qualified as estimated (J) and non-detected results flagged as estimated (U).

The following data are unusable as a result of qualification:

- Two matrix spike compounds, chlorotoluene and carbon tetrachloride had spike recoveries below recovery criteria. Affected nondetected sample values were flagged as unusable (UR).

All other parameters are acceptable, with no qualification required, for their intended use.

Table 1
Sample Locations

Sample Identification	Type	Analysis
FIELD BLANK		VOC
LOT #39	AMBIENT AIR	VOC/FIXED GASES*
LOT #60	SOIL VAPOR/SKIRT AIR	
LOT #61		
LOT #63		
LOT #64		
LOT #65		
LOT #66		
LOT #119		
LOT #121		
LOT #122		
LOT #123		
LOT #125		
LOT #135		
LOT #136		
LOT #134		
LOT #56		
LOT #55		
LOT #54		
LOT #53		
LOT #52		
LOT #51		
LOT #50		
LOT #49		
LOT #48		
LOT #47		
LOT #46		
LOT #44		
LOT #42		

SOIL GAS PROBES WERE ANALYZED FOR VOCs ONLY. SKIRT SAMPLES WERE ANALYZED FOR BOTH VOCs AND PERMANENT GASES

Table 2
Analytical Methods

PARAMETER	REFERENCE	SAMPLING TECHNIQUE	METHOD REPORTING LIMIT	COMMENTS
VOCS	EPA TO14	SUMMA CANISTER, EVACUATED	PPB-V 0.5	6 L SAMPLE
FIXED GASES CO2 - CARBON DIOXIDE CO - CARBON MONOXIDE CH4 - METHANE N2 - NITROGEN O2 - OXYGEN TNMHC - TOTAL NON-METHANE HCs	ASTM D1946	SUMMA CANISTER, EVACUATED	% (PPH-V) 0.001 0.001 0.001 0.001 0.010 0.010	SUB SAMPLE OF VOC SUMMA CANISTER

AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SOIL

ID#: 9409275A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100411	Date of Collection:	9/23/94
Dil. Factor:	1.6	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	1.6
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	2.2
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	1.0
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected R
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SKIRT

ID#: 9409275A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100409	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.15	0.30
Vinyl Chloride	0.15	Not Detected
Bromomethane	0.21	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.21	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.18	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.15	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.24	Not Detected
Benzene	0.75	0.95
1,2-Dichloroethane	0.18	Not Detected
Trichloroethene	0.15	Not Detected
1,2-Dichloropropane	0.15	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.18	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected
Tetrachloroethene	0.15	Not Detected
Ethylene Dibromide	0.15	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.2
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected R
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.24	Not Detected
Hexachlorobutadiene	0.15	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SOIL

ID#: 9409275A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100413	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	18
Freon 114	0.70	0.88
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.75
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	4.8
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	5.1
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.7
m,p-Xylene	0.70	7.4
o-Xylene	0.70	2.8
Styrene	0.70	Not Detected
1,1,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	0.78
1,2,4-Trimethylbenzene	0.70	3.0
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SKIRT

ID#: 9409275A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100414	Date of Collection: 9/23/94
Dil. Factor:	1.4	Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.83
Freon 114	0.70	Not Detected
Chloromethane	0.21	Not Detected
Vinyl Chloride	0.21	Not Detected
Bromomethane	0.29	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.29	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.25	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.21	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.34	Not Detected
Benzene	0.70	0.88
1,2-Dichloroethane	0.25	Not Detected
Trichloroethene	0.21	Not Detected
1,2-Dichloropropane	0.21	Not Detected
cis-1,3-Dichloropropene	0.29	Not Detected
Toluene	0.70	1.1
trans-1,3-Dichloropropene	0.25	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected
Tetrachloroethene	0.21	Not Detected
Ethylene Dibromide	0.21	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.34	Not Detected
Hexachlorobutadiene	0.21	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SOIL

ID#: 9409275A-20A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100415	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	1.1
Freon 114	0.70	Not Detected
Chloromethane	0.70	1.2
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.8
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	1.0
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	12
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	4.0
m,p-Xylene	0.70	18
o-Xylene	0.70	7.2
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	2.2
1,2,4-Trimethylbenzene	0.70	6.5
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected R
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9409275A-21A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100302	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	100
Freon 114	0.50	103
Chloromethane	0.50	119
Vinyl Chloride	0.50	115
Bromomethane	0.50	109
Chloroethane	0.50	107
Freon 11	0.50	100
1,1-Dichloroethene	0.50	104
Freon 113	0.50	106
Methylene Chloride	0.50	130
1,1-Dichloroethane	0.50	123
cis-1,2-Dichloroethene	0.50	100
Chloroform	0.50	99
1,1,1-Trichloroethane	0.50	95
Carbon Tetrachloride	0.50	72
Benzene	0.50	102
1,2-Dichloroethane	0.50	109
Trichloroethene	0.50	92
1,2-Dichloropropane	0.50	109
cis-1,3-Dichloropropene	0.50	99
Toluene	0.50	102
trans-1,3-Dichloropropene	0.50	94
1,1,2-Trichloroethane	0.50	113
Tetrachloroethene	0.50	88
Ethylene Dibromide	0.50	106
Chlorobenzene	0.50	102
Ethyl Benzene	0.50	108
m,p-Xylene	0.50	105
o-Xylene	0.50	106
Styrene	0.50	96
1,1,2,2-Tetrachloroethane	0.50	109
1,3,5-Trimethylbenzene	0.50	105
1,2,4-Trimethylbenzene	0.50	104
1,3-Dichlorobenzene	0.50	99
1,4-Dichlorobenzene	0.50	100
Chlorotoluene	0.50	20 Q
1,2-Dichlorobenzene	0.50	97
1,2,4-Trichlorobenzene	0.50	96
Hexachlorobutadiene	0.50	94

Q = Exceeds Quality Control limits of 70% to 130%.

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409275A-22A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100304	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	Not Detected
Hexachlorobutadiene	0.050	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	66	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409275A-22B

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100404	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.050	Not Detected
Vinyl Chloride	0.050	Not Detected
Bromomethane	0.070	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.070	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.060	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.050	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.080	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.060	Not Detected
Trichloroethene	0.050	Not Detected
1,2-Dichloropropane	0.050	Not Detected
cis-1,3-Dichloropropene	0.070	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.060	Not Detected
1,1,2-Trichloroethane	0.050	Not Detected
Tetrachloroethene	0.050	Not Detected
Ethylene Dibromide	0.050	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.080	Not Detected
Hexachlorobutadiene	0.050	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

MEMORANDUM

TO: Norseland Project File 933-1280

July 13, 1995

FR: S. Schildt *SS*

RE: Validation of pkg. 9409276A, reissued 6/5/95

~~Method Spike recovery of carbon tetrachloride was less than control limits. All carbon tetrachloride results are qualified as estimated (U).~~

Methylene chloride was detected in the laboratory blank. The methylene chloride result for sample 19A was qualified as a non-detect (U).

See original DV 10/94 12/94.

*Data Validation for T014 SDG's (275A, 276A, 277A)
performed on 12/01/94 is superseded by the
attached DV 960222*

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- UR - Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

DATA QUALIFICATION SUMMARY

SDG: 9409275B, 9409276B, 9409277B	REVIEWER: M. HIGGINS	DATE: December 1, 1994	PAGE <u>1</u> OF <u>1</u>
COMMENTS: VOLATILE ORGANICS TO-14			
COMPOUND/ ANALYTE	QUALIFIER	SAMPLES AFFECTED (SOIL and SKIRT)	REASON
CHLOROTOLUENE	UR	FIELD BLK (AMBIENT) LOT #39 LOT #60 LOT #61 LOT #63 (SOIL ONLY) LOT #64 LOT #51 LOT #50 LOT #49	LOW SPIKE RECOVERY
ALL COMPOUNDS	U/J	LOT 60 (SOIL ONLY)	LEAKY SUMMA VALVE
CARBON TETRACHLORIDE	UR	LOT #63 (SOIL ONLY) LOT #65 LOT #66 LOT #119 LOT #121 LOT #122 (SOIL ONLY) LOT #125 LOT #135 LOT #136 LOT #134 LOT #56 LOT #55 LOT #54 LOT #53 LOT #52 LOT #44 LOT #42	LOW SPIKE RECOVERY

ATTACHMENT 3
ANNOTATED LABORATORY REPORTS

AIR TOXICS LTD.

SAMPLE NAME: Field Blank
 ID#: 9409275A-01A
EPA METHOD TO-14 GC/MS Full Scan

File Name: F100305 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	3.1
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	5.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.77
m,p-Xylene	0.70	2.8
o-Xylene	0.70	1.0
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.94
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SOIL
 ID#: 9409275A-02A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100306 Date of Collection: 9/23/94
 Dil. Factor: 4.0 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	2.0	Not Detected
Freon 114	2.0	Not Detected
Chloromethane	2.0	Not Detected
Vinyl Chloride	2.0	Not Detected
Bromomethane	2.0	Not Detected
Chloroethane	2.0	Not Detected
Freon 11	2.0	Not Detected
1,1-Dichloroethene	2.0	Not Detected
Freon 113	2.0	Not Detected
Methylene Chloride	2.0	Not Detected
1,1-Dichloroethane	2.0	Not Detected
cis-1,2-Dichloroethene	2.0	Not Detected
Chloroform	2.0	Not Detected
1,1,1-Trichloroethane	2.0	Not Detected
Carbon Tetrachloride	2.0	Not Detected
Benzene	2.0	7.3
1,2-Dichloroethane	2.0	Not Detected
Trichloroethene	2.0	Not Detected
1,2-Dichloropropane	2.0	Not Detected
cis-1,3-Dichloropropene	2.0	Not Detected
Toluene	2.0	12
trans-1,3-Dichloropropene	2.0	Not Detected
1,1,2-Trichloroethane	2.0	Not Detected
Tetrachloroethene	2.0	Not Detected
Ethylene Dibromide	2.0	Not Detected
Chlorobenzene	2.0	Not Detected
Ethyl Benzene	2.0	Not Detected
m,p-Xylene	2.0	5.8
o-Xylene	2.0	2.1
Styrene	2.0	Not Detected
1,1,2,2-Tetrachloroethane	2.0	Not Detected
1,3,5-Trimethylbenzene	2.0	Not Detected
1,2,4-Trimethylbenzene	2.0	Not Detected
1,3-Dichlorobenzene	2.0	Not Detected
1,4-Dichlorobenzene	2.0	Not Detected
Chlorotoluene	2.0	Not Detected
1,2-Dichlorobenzene	2.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected
Hexachlorobutadiene	2.0	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SKIRT

ID#: 9409275A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100307 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.70
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	4.4
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	1.2
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	6.3
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.88
m,p-Xylene	0.70	3.3
o-Xylene	0.70	1.3
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.99
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SOIL
 ID#: 9409275A-04A
 EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100314

Date of Collection: 9/23/94

Dil. Factor:

2.2

Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	3.2
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	5.4
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	3.4
o-Xylene	1.1	1.5
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	1.3
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SKIRT

ID#: 9409275A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100308 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	3.8
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	7.0
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.0
m,p-Xylene	0.70	3.8
o-Xylene	0.70	1.4
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.2
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	110	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SOIL
 ID#: 9409275A-06A
EPA METHOD TO-14 GC/MS Full Scan

File Name: F100309 Date of Collection: 9/23/94
 Dil. Factor: 2.2 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	2.3
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	4.3
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	2.0
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

W/M
9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SKIRT

ID#: 9409275A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100310 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	3.6
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	6.5
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	0.95
m,p-Xylene	0.75	3.5
o-Xylene	0.75	1.3
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	1.2
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SOIL
 ID#: 9409275A-08A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100419 Date of Collection: 9/23/94
 Dil. Factor: 11 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	5.5	Not Detected
Freon 114	5.5	Not Detected
Chloromethane	5.5	Not Detected
Vinyl Chloride	5.5	Not Detected
Bromomethane	5.5	Not Detected
Chloroethane	5.5	Not Detected
Freon 11	5.5	Not Detected
1,1-Dichloroethene	5.5	Not Detected
Freon 113	5.5	Not Detected
Methylene Chloride	5.5	Not Detected
1,1-Dichloroethane	5.5	Not Detected
cis-1,2-Dichloroethene	5.5	Not Detected
Chloroform	5.5	Not Detected
1,1,1-Trichloroethane	5.5	Not Detected
Carbon Tetrachloride	5.5	Not Detected
Benzene	5.5	15
1,2-Dichloroethane	5.5	Not Detected
Trichloroethene	5.5	Not Detected
1,2-Dichloropropane	5.5	Not Detected
cis-1,3-Dichloropropene	5.5	Not Detected
Toluene	5.5	Not Detected
trans-1,3-Dichloropropene	5.5	Not Detected
1,1,2-Trichloroethane	5.5	Not Detected
Tetrachloroethene	5.5	Not Detected
Ethylene Dibromide	5.5	Not Detected
Chlorobenzene	5.5	Not Detected
Ethyl Benzene	5.5	Not Detected
m,p-Xylene	5.5	Not Detected
o-Xylene	5.5	Not Detected
Styrene	5.5	Not Detected
1,1,2,2-Tetrachloroethane	5.5	Not Detected
1,3,5-Trimethylbenzene	5.5	Not Detected
1,2,4-Trimethylbenzene	5.5	Not Detected
1,3-Dichlorobenzene	5.5	Not Detected
1,4-Dichlorobenzene	5.5	Not Detected
Chlorotoluene	5.5	Not Detected
1,2-Dichlorobenzene	5.5	Not Detected
1,2,4-Trichlorobenzene	5.5	Not Detected
Hexachlorobutadiene	5.5	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SKIRT

ID#: 9409275A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100312 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	3.1
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	4.5
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	0.71
m,p-Xylene	0.70	2.6
o-Xylene	0.70	1.0
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	0.89
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

VW
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SOIL
 ID#: 9409275A-10A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100313 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	0.75
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Odifluorotoluene	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SKIRT

ID#: 9409275A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100315

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	2.5
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	3.6
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	2.4
o-Xylene	0.70	0.94
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SOIL
 ID#: 9409275A-12A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100416 Date of Collection: 9/23/94
 Dil. Factor: 1.6 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	1.3
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	2.6
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	0.98
o-Xylene	0.80	Not Detected
Styrene	0.80	0.81
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SKIRT

ID#: 9409275A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100418 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	-Not Detected- 142
Benzene	0.70	1.6
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.4
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.2
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

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9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SOIL
 ID#: 9409275A-14A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100405 Date of Collection: 9/23/94
 Dil. Factor: 1.3 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	125	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SKIRT

ID#: 9409275A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100406 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	-Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.6
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.96
o-Xylene	0.70	Not Detected
Styrene	0.70	0.70
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SOIL

ID#: 9409275A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100411 Date of Collection: 9/23/94
 Dil. Factor: 1.6 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	-Not Detected-
Benzene	0.80	1.6
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	2.2
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	1.0
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SKIRT

ID#: 9409275A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100409

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.95
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.2
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

WMM
9/4/2011

AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SOIL

ID#: 9409275A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100413 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	18
Freon 114	0.70	0.88
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.75
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	4.8
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	5.1
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.7
m,p-Xylene	0.70	7.4
o-Xylene	0.70	2.8
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	0.78
1,2,4-Trimethylbenzene	0.70	3.0
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	104	70-130

MM
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SKIRT

ID#: 9409275A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100414 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.83
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.88
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

WW
9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SOIL

ID#: 9409275A-20A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100415 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	1.1
Freon 114	0.70	Not Detected
Chloromethane	0.70	1.2
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.8
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	1.0
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	12
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	4.0
m,p-Xylene	0.70	18
o-Xylene	0.70	7.2
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	2.2
1,2,4-Trimethylbenzene	0.70	6.5
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

W/W
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AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SKIRT

ID#: 9409276A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100424

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.81
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromoanisole	102	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SOIL

ID#: 9409276A-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100425	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 1,13	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	1.5
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	4.0
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130

MMJ
6/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SKIRT

ID#: 9409276A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100426

Date of Collection: 9/23/94

Dil. Factor:

1.6

Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.80	Not Detected
Freon 114	0.80	Not Detected
Chloromethane	0.80	Not Detected
Vinyl Chloride	0.80	Not Detected
Bromomethane	0.80	Not Detected
Chloroethane	0.80	Not Detected
Freon 11	0.80	Not Detected
1,1-Dichloroethene	0.80	Not Detected
Freon 113	0.80	Not Detected
Methylene Chloride	0.80	Not Detected
1,1-Dichloroethane	0.80	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected
Chloroform	0.80	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected
Carbon Tetrachloride	0.80	Not Detected
Benzene	0.80	0.91
1,2-Dichloroethane	0.80	Not Detected
Trichloroethene	0.80	Not Detected
1,2-Dichloropropane	0.80	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected
Toluene	0.80	1.5
trans-1,3-Dichloropropene	0.80	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected
Tetrachloroethene	0.80	Not Detected
Ethylene Dibromide	0.80	Not Detected
Chlorobenzene	0.80	Not Detected
Ethyl Benzene	0.80	Not Detected
m,p-Xylene	0.80	Not Detected
o-Xylene	0.80	Not Detected
Styrene	0.80	Not Detected
1,1,2-Tetrachloroethane	0.80	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected
Chlorotoluene	0.80	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected
Hexachlorobutadiene	0.80	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene- ²⁸	102	70-130
4-Bromofluorobenzene	105	70-130

W/H
4/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SOIL

ID#: 9409276A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100427 Date of Collection: 9/23/94
 Dil. Factor: 1.8 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.90	Not Detected
Freon 114	0.90	Not Detected
Chloromethane	0.90	Not Detected
Vinyl Chloride	0.90	Not Detected
Bromomethane	0.90	Not Detected
Chloroethane	0.90	Not Detected
Freon 11	0.90	Not Detected
1,1-Dichloroethene	0.90	Not Detected
Freon 1,13	0.90	Not Detected
Methylene Chloride	0.90	Not Detected
1,1-Dichloroethane	0.90	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected
Chloroform	0.90	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected
Carbon Tetrachloride	0.90	-Not Detected- <i>UR</i>
Benzene	0.90	1.8
1,2-Dichloroethane	0.90	Not Detected
Trichloroethene	0.90	Not Detected
1,2-Dichloropropane	0.90	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected
Toluene	0.90	8.2
trans-1,3-Dichloropropene	0.90	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected
Tetrachloroethene	0.90	Not Detected
Ethylene Dibromide	0.90	Not Detected
Chlorobenzene	0.90	Not Detected
Ethyl Benzene	0.90	1.9
m,p-Xylene	0.90	8.0
o-Xylene	0.90	3.3
Styrene	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected
1,2,4-Trimethylbenzene	0.90	2.8
1,3-Dichlorobenzene	0.90	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected
Chlorotoluene	0.90	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected
Hexachlorobutadiene	0.90	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

*WWR
9/12/01*

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SKIRT

ID#: 9409276A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100428 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 1,13	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.3
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.4
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	109	70-130

MM
9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SOIL

ID#: 9409276A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100429

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	Not Detected
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SKIRT

ID#: 9409276A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100513 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.90
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.3
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SOIL

ID#: 9409276A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100514

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	1.0
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	2.2
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.3
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SKIRT

ID#: 9409276A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100515 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	1.2
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.7
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.2
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	117	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

7/11/2011

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SOIL

ID#: 9409276A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100516 Date of Collection: 9/23/94
 Dil. Factor: 1.3 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.65	Not Detected
Freon 114	0.65	Not Detected
Chloromethane	0.65	Not Detected
Vinyl Chloride	0.65	Not Detected
Bromomethane	0.65	Not Detected
Chloroethane	0.65	Not Detected
Freon 11	0.65	Not Detected
1,1-Dichloroethene	0.65	Not Detected
Freon 113	0.65	Not Detected
Methylene Chloride	0.65	Not Detected
1,1-Dichloroethane	0.65	Not Detected
cis-1,2-Dichloroethene	0.65	Not Detected
Chloroform	0.65	Not Detected
1,1,1-Trichloroethane	0.65	Not Detected
Carbon Tetrachloride	0.65	Not Detected
Benzene	0.65	Not Detected
1,2-Dichloroethane	0.65	Not Detected
Trichloroethene	0.65	Not Detected
1,2-Dichloropropane	0.65	Not Detected
cis-1,3-Dichloropropene	0.65	Not Detected
Toluene	0.65	Not Detected
trans-1,3-Dichloropropene	0.65	Not Detected
1,1,2-Trichloroethane	0.65	Not Detected
Tetrachloroethene	0.65	Not Detected
Ethylene Dibromide	0.65	Not Detected
Chlorobenzene	0.65	Not Detected
Ethyl Benzene	0.65	Not Detected
m,p-Xylene	0.65	Not Detected
o-Xylene	0.65	Not Detected
Styrene	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.65	Not Detected
1,3,5-Trimethylbenzene	0.65	Not Detected
1,2,4-Trimethylbenzene	0.65	Not Detected
1,3-Dichlorobenzene	0.65	Not Detected
1,4-Dichlorobenzene	0.65	Not Detected
Chlorotoluene	0.65	Not Detected
1,2-Dichlorobenzene	0.65	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected
Hexachlorobutadiene	0.65	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	111	70-130

11/14/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SKIRT

ID#: 9409276A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100605 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	1.7
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.2
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

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9/10/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SOIL
 ID#: 9409276A-12A
EPA METHOD TO-14 GC/MS Full Scan

File Name: F100607 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SKIRT

ID#: 9409276A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100608	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/6/94
Compound	Det. Limit (ppbv)	Amount (ppbv)	
Freon 12	0.70	Not Detected	
Freon 114	0.70	Not Detected	
Chloromethane	0.70	Not Detected	
Vinyl Chloride	0.70	Not Detected	
Bromomethane	0.70	Not Detected	
Chloroethane	0.70	Not Detected	
Freon 11	0.70	Not Detected	
1,1-Dichloroethene	0.70	Not Detected	
Freon 113	0.70	Not Detected	
Methylene Chloride	0.70	Not Detected	
1,1-Dichloroethane	0.70	Not Detected	
cis-1,2-Dichloroethene	0.70	Not Detected	
Chloroform	0.70	Not Detected	
1,1,1-Trichloroethane	0.70	Not Detected	
Carbon Tetrachloride	0.70	Not Detected	u/R
Benzene	0.70	1.8	
1,2-Dichloroethane	0.70	Not Detected	
Trichloroethene	0.70	Not Detected	
1,2-Dichloropropane	0.70	Not Detected	
cis-1,3-Dichloropropene	0.70	Not Detected	
Toluene	0.70	1.4	
trans-1,3-Dichloropropene	0.70	Not Detected	
1,1,2-Trichloroethane	0.70	Not Detected	
Tetrachloroethene	0.70	Not Detected	
Ethylene Dibromide	0.70	Not Detected	
Chlorobenzene	0.70	Not Detected	
Ethyl Benzene	0.70	Not Detected	
m,p-Xylene	0.70	0.70	
o-Xylene	0.70	Not Detected	
Styrene	0.70	Not Detected	
1,1,2,2-Tetrachloroethane	0.70	Not Detected	
1,3,5-Trimethylbenzene	0.70	Not Detected	
1,2,4-Trimethylbenzene	0.70	Not Detected	
1,3-Dichlorobenzene	0.70	Not Detected	
1,4-Dichlorobenzene	0.70	Not Detected	
Chlorotoluene	0.70	Not Detected	
1,2-Dichlorobenzene	0.70	Not Detected	
1,2,4-Trichlorobenzene	0.70	Not Detected	
Hexachlorobutadiene	0.70	Not Detected	

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

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9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SOIL
 ID#: 9409276A-14A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: F100609 Date of Collection: 9/23/94
 Dil. Factor: 2.3 Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.2	Not Detected
Freon 114	1.2	Not Detected
Chloromethane	1.2	Not Detected
Vinyl Chloride	1.2	Not Detected
Bromomethane	1.2	Not Detected
Chloroethane	1.2	Not Detected
Freon 11	1.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected
Freon 113	1.2	Not Detected
Methylene Chloride	1.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected
Chloroform	1.2	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected
Benzene	1.2	1.2
1,2-Dichloroethane	1.2	Not Detected
Trichloroethene	1.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected
Toluene	1.2	4.1
trans-1,3-Dichloropropene	1.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected
Tetrachloroethene	1.2	Not Detected
Ethylene Dibromide	1.2	Not Detected
Chlorobenzene	1.2	Not Detected
Ethyl Benzene	1.2	Not Detected
m,p-Xylene	1.2	1.1
o-Xylene	1.2	Not Detected
Styrene	1.2	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected
Chlorotoluene	1.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected
Hexachlorobutadiene	1.2	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SKIRT

ID#: 9409276A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100610 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 1,13	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	0.98
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.72
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.0
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canlster

Surrogates	% Recovery	Method Limits
Octafluorotoluene	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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9/12/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SOIL

ID#: 9409276A-16A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100611 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	✓.4
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected ✓R
Benzene	0.70	8.9
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	17
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	2.2
m,p-Xylene	0.70	7.6
o-Xylene	0.70	2.7
Styrene	0.70	0.96
1,1,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.7
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	102	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SKIRT

ID#: 9409276A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name: F100705 **Date of Collection:** 9/23/94
DIL. Factor: 1.4 **Date of Analysis:** 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.3
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	3.6
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	7.2
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	1.2
m,p-Xylene	0.70	3.8
o-Xylene	0.70	1.4
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	1.1
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SOIL

ID#: 9409276A-18A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100708

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.76
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.0
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	126	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SKIRT

ID#: 9409276A-19A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100613

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/6/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 1,13	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.8
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.88
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SOIL

ID#: 9409276A-20A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

F100709

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/7/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SKIRT

ID#: 9409277A-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100307 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.83
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.88
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	1.6
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.0
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	82	70-130
Toluene-d8	108	70-130
<i>t</i> -Bromofluorobenzene	90	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SOIL
 ID#: 9409277A-02A
EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100308 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.86
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	Not Detected
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	Not Detected
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SKIRT

ID#: 9409277A-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100309 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.92
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	0.74
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.0
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	3.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.5
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	90	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	79	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SOIL

ID#: 9409277A-04A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100310 Date of Collection: 9/23/94
 Dil. Factor: 1.8 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.90	Not Detected
Freon 114	0.90	Not Detected
Chloromethane	0.90	Not Detected
Vinyl Chloride	0.90	Not Detected
Bromomethane	0.90	Not Detected
Chloroethane	0.90	Not Detected
Freon 11	0.90	Not Detected
1,1-Dichloroethene	0.90	Not Detected
Freon 113	0.90	Not Detected
Methylene Chloride	0.90	Not Detected
1,1-Dichloroethane	0.90	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected
Chloroform	0.90	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected
Carbon Tetrachloride	0.90	Not Detected
Benzene	0.90	Not Detected
1,2-Dichloroethane	0.90	Not Detected
Trichloroethene	0.90	Not Detected
1,2-Dichloropropane	0.90	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected
Toluene	0.90	2.0
trans-1,3-Dichloropropene	0.90	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected
Tetrachloroethene	0.90	Not Detected
Ethylene Dibromide	0.90	Not Detected
Chlorobenzene	0.90	Not Detected
Ethyl Benzene	0.90	Not Detected
m,p-Xylene	0.90	0.90
o-Xylene	0.90	Not Detected
Styrene	0.90	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected
1,2,4-Trimethylbenzene	0.90	Not Detected
1,3-Dichlorobenzene	0.90	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected
Chlorotoluene	0.90	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected
1,2,4-Trichlorobenzene	0.90	Not Detected
Hexachlorobutadiene	0.90	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	95	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SKIRT

ID#: 9409277A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100311 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.85
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	1.2
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	2.3
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.3
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected--
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	122	70-130
4-Bromofluorobenzene	76	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SOIL
 ID#: 9409277A-06A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100312 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	Not Detected
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	Not Detected
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	Not Detected
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	Not Detected
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	71	70-130

W/W
941201

AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SKIRT

ID#: 9409277A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

7100313

Date of Collection: 9/23/94

Dil. Factor:

1.5

Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.84
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	0.80
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	2.2
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	1.4
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	3.1
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.4
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Difluorotoluene	89	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	71	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SOIL

ID#: 9409277A-08A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100407 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.57 J
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.69 J
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	1.4
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.3
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

J = Value reported less than the detection limit. Confirmed by duplicate analysis.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	88	70-130

W/W
9/1/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SKIRT

ID#: 9409277A-09A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100408 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.74
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	0.97
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	1.7
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.96
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	76	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SOIL

ID#: 9409277A-10A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100410 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.85
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.1
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.1
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.1
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	85	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	73	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SKIRT

ID#: 9409277A-11A

EPA METHOD TO-14 GC/MS Full Scan

File Name:

7100411

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	3.1
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	1.3
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	1.2
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	3.5
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	1.7
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	93	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	82	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SOIL

ID#: 9409277A-12A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100412 Date of Collection: 9/23/94
 Dil. Factor: 2.1 Date of Analysis: 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	1.1
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	2.7
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	1.1
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SKIRT

ID#: 9409277A-13A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100414 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/4/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	0.75
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	Not Detected
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	1.2
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	2.1
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.0
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SOIL
 ID#: 9409277A-14A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100505 Date of Collection: 9/23/94
 Dil. Factor: 2.4 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.2	Not Detected
Freon 114	1.2	Not Detected
Chloromethane	1.2	Not Detected
Vinyl Chloride	1.2	Not Detected
Bromomethane	1.2	Not Detected
Chloroethane	1.2	Not Detected
Freon 11	1.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected
Freon 113	1.2	Not Detected
Methylene Chloride	1.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected
Chloroform	1.2	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected
Benzene	1.2	Not Detected
1,2-Dichloroethane	1.2	Not Detected
Trichloroethene	1.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected
Toluene	1.2	1.7
trans-1,3-Dichloropropene	1.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected
Tetrachloroethene	1.2	22
Ethylene Dibromide	1.2	Not Detected
Chlorobenzene	1.2	Not Detected
Ethyl Benzene	1.2	Not Detected
m,p-Xylene	1.2	Not Detected
o-Xylene	1.2	Not Detected
Styrene	1.2	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected
Chlorotoluene	1.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected
Hexachlorobutadiene	1.2	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octallyluorotoluene	82	70-130
Toluene-d8	128	70-130
4-Bromofluorobenzene	72	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SKIRT

ID#: 9409277A-15A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100506 Date of Collection: 9/23/94
 Dil. Factor: 1.5 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.75	Not Detected
Freon 114	0.75	Not Detected
Chloromethane	0.75	Not Detected
Vinyl Chloride	0.75	Not Detected
Bromomethane	0.75	Not Detected
Chloroethane	0.75	Not Detected
Freon 11	0.75	Not Detected
1,1-Dichloroethene	0.75	Not Detected
Freon 113	0.75	Not Detected
Methylene Chloride	0.75	Not Detected
1,1-Dichloroethane	0.75	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected
Chloroform	0.75	Not Detected
1,1,1-Trichloroethane	0.75	0.95
Carbon Tetrachloride	0.75	Not Detected
Benzene	0.75	0.97
1,2-Dichloroethane	0.75	Not Detected
Trichloroethene	0.75	Not Detected
1,2-Dichloropropane	0.75	Not Detected
cis-1,3-Dichloropropene	0.75	Not Detected
Toluene	0.75	2.3
trans-1,3-Dichloropropene	0.75	Not Detected
1,1,2-Trichloroethane	0.75	Not Detected
Tetrachloroethene	0.75	Not Detected
Ethylene Dibromide	0.75	Not Detected
Chlorobenzene	0.75	Not Detected
Ethyl Benzene	0.75	Not Detected
m,p-Xylene	0.75	1.7
o-Xylene	0.75	Not Detected
Styrene	0.75	Not Detected
1,1,2,2-Tetrachloroethane	0.75	Not Detected
1,3,5-Trimethylbenzene	0.75	Not Detected
1,2,4-Trimethylbenzene	0.75	Not Detected
1,3-Dichlorobenzene	0.75	Not Detected
1,4-Dichlorobenzene	0.75	Not Detected
Chlorotoluene	0.75	Not Detected
1,2-Dichlorobenzene	0.75	Not Detected
1,2,4-Trichlorobenzene	0.75	Not Detected
Hexachlorobutadiene	0.75	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	130	70-130
4-Bromofluorobenzene	74	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SOIL
 ID#: 9409277A-16A
 EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100508 Date of Collection: 9/23/94
 Dil. Factor: 2.1 Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.1	Not Detected
Freon 114	1.1	Not Detected
Chloromethane	1.1	Not Detected
Vinyl Chloride	1.1	Not Detected
Bromomethane	1.1	Not Detected
Chloroethane	1.1	Not Detected
Freon 11	1.1	Not Detected
1,1-Dichloroethene	1.1	Not Detected
Freon 113	1.1	Not Detected
Methylene Chloride	1.1	Not Detected
1,1-Dichloroethane	1.1	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected
Chloroform	1.1	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected
Benzene	1.1	Not Detected
1,2-Dichloroethane	1.1	Not Detected
Trichloroethene	1.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected
Toluene	1.1	3.8
trans-1,3-Dichloropropene	1.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected
Tetrachloroethene	1.1	Not Detected
Ethylene Dibromide	1.1	Not Detected
Chlorobenzene	1.1	Not Detected
Ethyl Benzene	1.1	Not Detected
m,p-Xylene	1.1	Not Detected
o-Xylene	1.1	Not Detected
Styrene	1.1	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected
Chlorotoluene	1.1	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	80	70-130

W/W
9/4/201

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SKIRT

ID#: 9409277A-17A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 7100509 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/5/94

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.70	0.76
Freon 114	0.70	Not Detected
Chloromethane	0.70	Not Detected
Vinyl Chloride	0.70	Not Detected
Bromomethane	0.70	Not Detected
Chloroethane	0.70	Not Detected
Freon 11	0.70	Not Detected
1,1-Dichloroethene	0.70	Not Detected
Freon 113	0.70	Not Detected
Methylene Chloride	0.70	Not Detected
1,1-Dichloroethane	0.70	Not Detected
cis-1,2-Dichloroethene	0.70	Not Detected
Chloroform	0.70	Not Detected
1,1,1-Trichloroethane	0.70	Not Detected
Carbon Tetrachloride	0.70	Not Detected
Benzene	0.70	2.6
1,2-Dichloroethane	0.70	Not Detected
Trichloroethene	0.70	Not Detected
1,2-Dichloropropane	0.70	Not Detected
cis-1,3-Dichloropropene	0.70	Not Detected
Toluene	0.70	2.2
trans-1,3-Dichloropropene	0.70	Not Detected
1,1,2-Trichloroethane	0.70	Not Detected
Tetrachloroethene	0.70	Not Detected
Ethylene Dibromide	0.70	Not Detected
Chlorobenzene	0.70	Not Detected
Ethyl Benzene	0.70	Not Detected
m,p-Xylene	0.70	0.86
o-Xylene	0.70	Not Detected
Styrene	0.70	Not Detected
1,1,2,2-Tetrachloroethane	0.70	Not Detected
1,3,5-Trimethylbenzene	0.70	Not Detected
1,2,4-Trimethylbenzene	0.70	Not Detected
1,3-Dichlorobenzene	0.70	Not Detected
1,4-Dichlorobenzene	0.70	Not Detected
Chlorotoluene	0.70	Not Detected
1,2-Dichlorobenzene	0.70	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected
Hexachlorobutadiene	0.70	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	83	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	74	70-130

W/WL
94/201

AIR TOXICS LTD.SAMPLE NAME: LOT #39-SKIRT
ID#: 9409275B-01AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100103 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.059
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

W.W.
9/1/201

AIR TOXICS LTD.SAMPLE NAME: LOT #60-SKIRT
ID#: 9409275B-02AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:

3100104

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.056
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister


MMW
10/1/94

AIR TOXICS LTD.SAMPLE NAME: LOT #61-SKIRT
ID#: 9409275B-03AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100105 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.055
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister



AIR TOXICS LTD.SAMPLE NAME: LOT #63-SKIRT
ID#: 9409275B-04A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**File Name: 3100106 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.056
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

WJL
94201

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SKIRT
 ID#: 9409275B-05A

**Atmospheric Gases by Modified ASTM D-3416
 GC/TCD/FID**

File Name:	3100107	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.058
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: LOT #65-SKIRT
ID#: 9409275B-06AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:	3100108	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.049
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

A handwritten mark consisting of several loops and lines, possibly a signature or a code, located in the bottom right corner of the page.

AIR TOXICS LTD.SAMPLE NAME: LOT #66-SKIRT
ID#: 9409275B-07AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100109 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.051
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

94/201

AIR TOXICS LTD.SAMPLE NAME: LOT #119-SKIRT
ID#: 9409275B-08A**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name: 3100111 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.048
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

A handwritten signature or mark consisting of several diagonal lines and the numbers "641201" written vertically.

AIR TOXICS LTD.SAMPLE NAME: LOT #121-SKIRT
ID#: 9409275B-09AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100112 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.060
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

W.M.
9/4/2011

AIR TOXICS LTD.SAMPLE NAME: LOT #122-SKIRT
ID#: 9409276B-01AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093012 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.052
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

W.W.
9/12/01

AIR TOXICS LTD.SAMPLE NAME: LOT #123-SKIRT
ID#: 9409276B-02AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093013 Date of Collection: 9/23/94
Dil. Factor: 1.6 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.053
Total Non-Methane Hydrocarbons*	0.016	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

WMA
9/12/01

AIR TOXICS LTD.SAMPLE NAME: LOT #125-SKIRT
ID#: 9409276B-03AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093014 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.053
Total Non-Methane Hydrocarbons*	0.015	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

W.W.
9/1/01

AIR TOXICS LTD.SAMPLE NAME: LOT #135-SKIRT
ID#: 9409276B-04AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: **3093016** Date of Collection: **9/23/94**
Dil. Factor: **1.4** Date of Analysis: **9/30/94**

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.053
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%) 100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister


941201

AIR TOXICS LTD.SAMPLE NAME: LOT #136-SKIRT
ID#: 9409276B-05AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093017 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.046
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

MMW
9/4/94

AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SKIRT
 ID#: 9409276B-06A

**Atmospheric Gases by Modified ASTM D-3416
 GC/TCD/FID**

File Name:	3093018	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	19
Nitrogen	0.002	81
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.049
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SKIRT
ID#: 9409276B-07A

**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name:	3093019	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.051
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: LOT #55-SKIRT
ID#: 9409276B-08AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093020 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.048
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

A handwritten signature or mark consisting of stylized, cursive letters, possibly reading "W.H. 9/4/2001".

AIR TOXICS LTD.SAMPLE NAME: LOT #54-SKIRT
ID#: 9409276B-09AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093021 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.050
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister


541001

AIR TOXICS LTD.SAMPLE NAME: LOT #53-SKIRT
ID#: 9409276B-10AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3093022 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 9/30/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	23
Nitrogen	0.001	77
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.049
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

A handwritten signature or mark consisting of several wavy, intersecting lines forming a stylized, illegible name.

AIR TOXICS LTD.SAMPLE NAME: LOT #52-SKIRT
ID#: 9409277B-01AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100115 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.052
Total Non-Methane Hydrocarbons*	0.015	Not Detected
		Total (%) 100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

A handwritten signature or mark consisting of a stylized 'W' or 'M' followed by the date '941201'.

AIR TOXICS LTD.SAMPLE NAME: LOT #51-SKIRT
ID#: 9409277B-02AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100116 Date of Collection: 9/23/94
Dil. Factor: 1.4 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.060
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

MMZ
9/4/01

AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SKIRT
 ID#: 9409277B-03A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name: 3100117 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.048
Total Non-Methane Hydrocarbons*	0.015	Not Detected
		Total (%) 100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.SAMPLE NAME: LOT #49-SKIRT
ID#: 9409277B-04AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FIDFile Name: 3100118 Date of Collection: 9/23/94
Dil. Factor: 1.5 Date of Analysis: 10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.049
Total Non-Methane Hydrocarbons*	0.015	Not Detected
		Total (%) 100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister


MM
9/4/94

AIR TOXICS LTD.SAMPLE NAME: LOT #48-SKIRT
ID#: 9409277B-05AAtmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:	3100119	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	21
Nitrogen	0.001	79
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.048
Total Non-Methane Hydrocarbons*	0.014	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

541201

ATTACHMENT 4

LABORATORY NARRATIVE and CHAIN-OF-CUSTODY DOCUMENTATION

LAB NARRATIVE:

Sample LOT #60-SOIL had a leaking valve. Data reported as estimated.

*Will
9/10/08*



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Lot # 001862

Page 1 of 6

CHAIN-OF-CUSTODY RECORD

Contact Person <u>MICHAEL LOBRECHT</u>	Project Info:		Turn Around Time:	
Company <u>GOLDE R ASSOCIATES</u>	P.O. # <u>933-1280</u>	Project # <u>KITSAP Co/</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush
Address <u>4104 - 148th Ave NE City REDMOND State WA Zip 98052</u>	Project Name <u>NORSELAND REAS</u>	Specify <u>100%</u>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	
01A	FIELD BANK	9/23/94 8:15a	TO-14	Canister Pressure / Vacuum Receipt
02A	LOT # 39 - SOIL	9/23/94 8:17a	"	Initial Final Receipt
03A	LOT # 39 - SKIRT	9/23/94 8:17a	"	2.5" Hg
04A	LOT # 60 - SOIL	9/23/94 8:26a	"	0.5" Hg
05A	LOT # 60 - SKIRT	9/23/94 8:26a	"	5.5" Hg
06A	LOT # 61 - SOIL	9/23/94 8:32a	"	1.5" Hg
07A	LOT # 61 - SKIRT	9/23/94 8:32a	"	11.5" Hg
08A	LOT # 63 - SOIL	9/23/94 8:41a	"	2.5" Hg
09A	LOT # 63 - SKIRT	9/23/94 8:41a	"	3.5" Hg
10A	LOT # 64 - SOIL	9/23/94 8:48a	"	1.5" Hg
Collected By: <u>DAVID SLATER</u>		Signature	Notes: ASTM D-1946 Fixed gas for skirt samples on 1/4.	
Relinquished By: <u>Daniel Z. Slater</u>		Received By: <u>David Z. Slater</u>	Received Date/Time <u>2/26/94 2752P94</u>	
Relinquished By: <u>Daniel Z. Slater</u>		Received By: <u>David Z. Slater</u>	Received Date/Time <u>2/26/94 2752P94</u>	
Relinquished By: <u></u>		Received By: <u></u>	Received Date/Time <u></u>	
Shipper Name <u>FED-X</u>		AI Bill # <u>3978912253</u>	Opened By: <u></u>	Date/Time <u></u>
Lab Use Only		Temp: (°C) <u>300P</u>	Condition <u>Good</u>	Custody Seals Intact? <u>Yes</u>
		Work Order # <u>040927534</u>	Yes <u>None</u>	No <u>None</u>



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020
No. 001860

CHAIN-OF-CUSTODY RECORD

Page 2 of 6

Contact Person <u>MICHAEL LUBRECHT</u> Company <u>GOLDER ASSOCIATES</u> Address <u>4104-148th AVE NE</u> City <u>REDMOND</u> State <u>WA</u> Zip <u>98052</u> Phone <u>(206) 883-0777</u> FAX <u>(206) 882-5498</u>	Project info: P.O. # <u>933-1280</u> Project # <u>933-1280</u> Project Name <u>KITSAP Co.</u> <u>NORSELAND RE-FS</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush _____ Specify _____ <u>TOS</u>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial Final Receipt
1A	LOT #64 - SKIRT	9/23/94 8:48a	TO-14, ASTM D-1946 FG.	2.0 "Hg
12A	LOT #65 - SOIL	9/23/94 8:55a	"	4.0 "Hg
13A	LOT #65 - SKIRT	9/23/94 8:55a	"	2.0 "Hg
14A	LOT #66 - SOIL	9/23/94 9:05a	"	0 "Hg
15A	LOT #66 - SKIRT	9/23/94 9:05a	"	1.5 "Hg
16A	LOT #119 - SOIL	9/23/94 9:15a	"	5.5 "Hg
17A/B	LOT #119 - SKIRT	9/23/94 9:15a	"	2.5 "Hg
18A	LOT #121 - SOIL	9/23/94 9:52a	"	1.0 "Hg
19A	LOT #121 - SKIRT	9/23/94 9:52a	"	2.0 "Hg
20A	LOT #122 - SOIL	9/23/94 9:49a	"	1.0 "Hg
Collected By: Print: <u>DAVID SLETER</u> Signature: <u>D. J. Slater</u>				Notes: ASTM D-1946 for "Skirt" samples only.
Relinquished By: (Signature) Date/Time <u>9/26/94</u> Received By: (Signature) Date/Time <u>27 SEP 1994</u>				
Relinquished By: (Signature) Date/Time <u>David J. Slater</u> Received By: (Signature) Date/Time <u>27 SEP 1994</u>				
Relinquished By: (Signature) Date/Time <u>David J. Slater</u> Received By: (Signature) Date/Time <u>27 SEP 1994</u>				
Shipper Name <u>FCI-D-X</u> Air Bill # <u>3998912252</u> Opened By: <u>SPS</u> Date/Time <u>27 SEP 1994</u> Temp. (°C) <u>600D</u> Condition <u>600D</u> Custody Seals Intact? <u>Yes</u> No <u>No</u> Work Order # <u>9409275A</u>				
Lab Use Only				



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No. 001856
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CHAIN-OFF-CUSTODY RECORD

Contact Person <u>MICHAEL LUBRECHT</u>	Project info:	
Company <u>GOLDER ASSOCIATES</u>	P.O. # <u>933-1280</u>	Turn Around Time:
Address <u>4104- 148th Ave. NE</u>	Project # <u>933-1280</u>	<input checked="" type="checkbox"/> Normal
Phone <u>(206) 883-0777</u>	Project Name <u>KITSAP CO.,</u>	<input type="checkbox"/> Rush _____
Field Sample I.D.	Date & Time	Analyses Requested
Lab I.D.		
01A LOT # 122 - SKIRT	9/23/94 9:49	TO-14, ASTM D-1946 FG.
02A LOT # 123 - SOIL	9/23/94 9:41a	" " "
03A LOT # 123 - SKIRT	9/23/94 9:41a	ASTM D-1946 FG.
04A LOT # 125 - SOIL	9/23/94 9:32a	" " "
05A LOT # 125 - SKIRT	9/23/94 9:32a	ASTM D 1946 FG.
06A LOT # 135 - SOIL	9/23/94 10:23a	" " "
07A LOT # 135 - SKIRT	9/23/94 10:23a	ASTM D 1946 FG.
08A LOT # 136 - SOIL	9/23/94 10:18a	" " "
09A LOT # 136 - SKIRT	9/23/94 10:18a	ASTM D 1946 FG.
10A LOT # 134 - SOIL	9/23/94 10:09a	" " "
Collected By: Print <u>DAVID SLATER</u>	Signature <u>David Slater</u>	Notes: ASTM D 1946 on "Scintor" standards
Relinquished By: (Signature) <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: (Signature) <u>David Slater</u>
Relinquished By: (Signature) <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: (Signature) <u>David Slater</u>
Relinquished By: (Signature) <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: (Signature) <u>David Slater</u>
Shipper Name: <u>EE D-X</u>	Job Bill #: <u>3970912255</u>	Opened By: <u>David Slater</u>
Lab Use Only	Date/Time <u>9/26/94 11:00a</u>	Temp. (°C) <u>600D</u>
	Condition <u>Good</u>	Custody Seals Intact? <u>Yes</u>
	Work Order # <u>9409276A</u>	



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No. 001857
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CHAIN-OF-CUSTODY RECORD

Contact Person <u>MICHAEL LOBRECHT</u>	Project info:		
Company <u>GOLDER ASSOCIATES</u>	P.O. # <u>933-1280</u>	Turn Around Time:	
Address <u>1104-148th Ave NE</u>	Project # <u>933-1280</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush _____
Phone <u>(206) 883-0777</u>	Project Name <u>KITSAP Co.</u>	Specify _____	
Northeast RI-FS			
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested
11A	LOT #134 - SKIRT	9/23/94 10:09a	To-14 , ASTM D-1946 F.G.
12A	LOT #56 - SOIL	9/23/94 10:32a	" " ,
13A	LOT #56 - SKIRT	9/23/94 10:32a	" , ASTM D-1946 F.G.
14A	LOT #55 - SOIL	9/23/94 10:41a	" ,
15A	LOT #55 - SKIRT	9/23/94 10:41a	" , ASTM D-1946 F.G.
16A	LOT #54 - SOIL	9/23/94 10:55a	" ,
17A/B	LOT #54 - SKIRT	9/23/94 10:55a	" ,
18A	LOT #53 - SOIL	9/23/94 11:10a	" ,
19A	LOT #53 - SKIRT	9/23/94 11:10a	" ,
20A	LOT #52 - SOIL	9/23/94 11:17a	" ,
Collected By: Print <u>DAVID SLATER</u>	Signature <u>David L Slater</u>	Notes: ASTAN D-1946 Fixed gases for skirt only fence S.	
Relinquished By: (Signature) <u>David L Slater</u>	Date/Time <u>9/26/94 11:00 AM</u>	Received By: (Signature) <u>John M. Johnson</u>	Date/Time <u>27 SEP 94</u>
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Shipper Name <u>FCD-X</u>	Air Bill # <u>39178412253</u>	Opened By: <u>CBA</u>	Date/Time
Lab Use Only		Condition <u>Good</u>	Work Order # <u>9409276A</u>
		Custody Seals Intact? <u>Yes</u>	Yes No <u>None</u>

AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SKIRT
 ID#: 9409277B-06A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:	3100120	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/1/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.050
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SKIRT
 ID#: 9409277B-07A

**Atmospheric Gases by Modified ASTM D-3416
 GC/TCD/FID**

File Name: 3100304 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/3/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.058
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SKIRT
ID#: 9409277B-08A

**Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID**

File Name:	3100305	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.002	22
Nitrogen	0.002	78
Carbon Monoxide	0.002	Not Detected
Methane	0.002	Not Detected
Carbon Dioxide	0.002	0.046
Total Non-Methane Hydrocarbons*	0.015	Not Detected
	Total (%)	100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SKIRT
 ID#: 9409277B-09A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:	3100306	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.001	22
Nitrogen	0.001	78
Carbon Monoxide	0.001	Not Detected
Methane	0.001	Not Detected
Carbon Dioxide	0.001	0.046
Total Non-Methane Hydrocarbons*	0.014	Not Detected
		Total (%)
		100

*Referenced to Propane

Container Type: 6 Liter SUMMA Canister



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No. 001858
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CHAIN-OFF-CUSTODY RECORD

Contact Person <u>MICHAEL LOBRECHT</u>	Project info:		Turn Around Time:		
Company <u>GOLDEK ASSOCIATES</u>	P.O. # <u>933-1280</u>	Project # <u>933-1280</u>	<input checked="" type="checkbox"/> Normal		
Address <u>4104 - 148th Ave. NE City REEDMOND State WA Zip 98052</u>	Rush	Project Name <u>KITSAP Co.</u>	<input type="checkbox"/> Rush		
Phone <u>(206) 883-0777</u>	Project Name <u>NORSELAND RJ-FS</u>		Specify _____		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Cannister Pressure / Vacuum Initial Final	Receipt
01A	LOT #52 - SKIRT	9/23/94 11:17a	TO-14	ASTM D-1946 F.G.	2.5" Hg
02A	LOT #51 - SOIL	9/23/94 11:45a	" "	"	7.5" Hg
03A	LOT #51 - SKIRT	9/23/94 11:45a	" "	ASTM D-1946 F.G.	1.0" Hg
04A	LOT #50 - SOIL	9/23/94 11:52a	" "	"	4.0" Hg
05A	LOT #50 - SKIRT	9/23/94 11:52a	" "	ASTM D-1946 F.G.	3.0" Hg
06A	LOT #49 - SOIL	9/23/94 11:58a	" "	"	2.0" Hg
07A/B	LOT #49 - SKIRT	9/23/94 11:58a	" "	ASTM D-1946 F.G.	3.0" Hg
08A	LOT #48 - SOIL	9/23/94 12:16p	" "	"	1.5" Hg
09A	LOT #48 - SKIRT	9/23/94 12:16p	" "	ASTM D-1946 F.G.	1.5" Hg
10A	LOT #47 - SOIL	9/23/94 12:27p	" "	"	2.0" Hg
Collected By: Print <u>DAVID SLATER</u>	Signature <u>David T Slater</u>	Received By: (Signature) <u>David T Slater</u>	Date/Time <u>9/26/94 11:30am</u>	Notes: <u>ASTM D-1946 Fixed gases for skirt samples only</u>	Work Order # <u>94092774</u>
Relinquished By: (Signature) <u>David T Slater</u>	Received By: (Signature) <u>David T Slater</u>	Date/Time <u>9/26/94 11:30am</u>	Date/Time <u>9/26/94 11:30am</u>		
Relinquished By: (Signature) <u>David T Slater</u>	Received By: (Signature) <u>David T Slater</u>	Date/Time <u>9/26/94 11:30am</u>	Date/Time <u>9/26/94 11:30am</u>		
Relinquished By: (Signature) <u>David T Slater</u>	Received By: (Signature) <u>David T Slater</u>	Date/Time <u>9/26/94 11:30am</u>	Date/Time <u>9/26/94 11:30am</u>		
Shipper Name <u>FED-X</u>	Air Bill # <u>3948912253</u>	Opened By: <u>BIA</u>	Date/Time <u>10/09/94 10:00AM</u>	Temp (°C) <u>6000</u>	Condition <u>Yes</u>
Lab Use Only					Custody Seals Intact? <u>None</u>



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No 001850

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CHAIN-OFF-CUSTODY RECORD

Contact Person <u>MICHAEL LOBRECHT</u>	Project Info:		Turn Around Time:	
Company <u>GOLDFINGER ASSOCIATES</u>	P.O. #	Project # <u>933-1280</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush _____ Specify _____
Address <u>4104-148th Ave. NE</u>	City <u>Redmond</u>	State <u>WA</u> Zip <u>98052</u>		
Phone <u>(206) 883-6777</u>	FAX <u>(206) 882-5498</u>	Project Name <u>KITSAP CO. NORSELAND RI-FS</u>		
Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	
			Canister Pressure / Vacuum Initial	Final Receipt
1A	LOT #47 - SKIRT	9/23/94 12:27p	TO-14	ASTM D-1946 F.G.
12A	LOT #46 - SOIL	9/23/94 12:34p	TO-14	ASTM D-1946 F.G.
13A	LOT #46 - SKIRT	9/23/94 12:34p	TO-14	ASTM D-1946 F.G.
14A	LOT #44 - SOIL	9/23/94 12:42p	TO-14	ASTM D-1946 F.G.
15A	LOT #44 - SKIRT	9/23/94 12:42p	TO-14	ASTM D-1946 F.G.
16A	LOT# 42 - SOIL	9/23/94 12:50p	TO-14	ASTM D-1946 F.G.
17A(B)	LOT# 42 - SKIRT	9/23/94 12:50p	TO-14	ASTM D-1946 F.G.
Collected By: Print <u>DAVID SLEATER</u>	Signature <u>David L. Slater</u>	Received By: (Signature) Date/Time <u>27 SEPT 1994</u>	Notes: ASTM D-1946 on "SKIRT" samples only	
Relinquished By: (Signature) Date/Time <u>David L. Slater 9/26/94</u>	Received By: (Signature) Date/Time <u>David L. Slater 9/26/94</u>			
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time			
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time			
Shipper Name <u>ED-X</u>	Air Bill # <u>3978917253</u>	Opened By: <u>Self</u> Date/Time <u>27 SEP 1994</u>	Temp. (°C) <u>600</u>	Condition <u>Good</u>
Lab Use Only		Custody Seals Intact? <u>Yes</u>	No <u>None</u>	Work Order # <u>9409277A</u>

ATTACHMENT 5
DATA VALIDATION SUPPORTING DOCUMENTATION

AIR TOXICS LTD.

SAMPLE NAME: Method Spike
 ID#: 9409275A-21A
EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100302	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/3/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	100
Freon 114	0.50	103
Chloromethane	0.50	119
Vinyl Chloride	0.50	115
Bromomethane	0.50	109
Chloroethane	0.50	107
Freon 11	0.50	100
1,1-Dichloroethene	0.50	104
Freon 113	0.50	106
Methylene Chloride	0.50	130
1,1-Dichloroethane	0.50	123
cis-1,2-Dichloroethene	0.50	100
Chloroform	0.50	99
1,1,1-Trichloroethane	0.50	95
Carbon Tetrachloride	0.50	72
Benzene	0.50	102
1,2-Dichloroethane	0.50	109
Trichloroethene	0.50	92
1,2-Dichloropropane	0.50	109
cis-1,3-Dichloropropene	0.50	99
Toluene	0.50	102
trans-1,3-Dichloropropene	0.50	94
1,1,2-Trichloroethane	0.50	113
Tetrachloroethene	0.50	88
Ethylene Dibromide	0.50	106
Chlorobenzene	0.50	102
Ethyl Benzene	0.50	108
m,p-Xylene	0.50	105
o-Xylene	0.50	106
Styrene	0.50	96
1,1,2,2-Tetrachloroethane	0.50	109
1,3,5-Trimethylbenzene	0.50	105
1,2,4-Trimethylbenzene	0.50	104
1,3-Dichlorobenzene	0.50	99
1,4-Dichlorobenzene	0.50	100
Chlorotoluene	0.50	20 Q
1,2-Dichlorobenzene	0.50	97
1,2,4-Trichlorobenzene	0.50	96
Hexachlorobutadiene	0.50	94

Q = Exceeds Quality Control limits of 70% to 130%.

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	97	70-130
4-Bromo Fluorobenzene	96	70-130

Method Spike
 MM
 9/4/028

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9409276A-21A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	F100503	Date of Collection: NA
Dil. Factor:	1.0	Date of Analysis: 10/5/94

Compound	Det. Limit (ppbv)	% Recovery
Freon 12	0.50	100
Freon 114	0.50	103
Chloromethane	0.50	119
Vinyl Chloride	0.50	113
Bromomethane	0.50	112
Chloroethane	0.50	107
Freon 11	0.50	99
1,1-Dichloroethene	0.50	104
Freon 113	0.50	105
Methylene Chloride	0.50	130
1,1-Dichloroethane	0.50	121
cis-1,2-Dichloroethene	0.50	100
Chloroform	0.50	98
1,1,1-Trichloroethane	0.50	104
Carbon Tetrachloride	0.50	69 Q
Benzene	0.50	99
1,2-Dichloroethane	0.50	104
Trichloroethene	0.50	88
1,2-Dichloropropane	0.50	111
cis-1,3-Dichloropropene	0.50	101
Toluene	0.50	105
trans-1,3-Dichloropropene	0.50	92
1,1,2-Trichloroethane	0.50	118
Tetrachloroethene	0.50	89
Ethylene Dibromide	0.50	116
Chlorobenzene	0.50	106
Ethyl Benzene	0.50	109
m,p-Xylene	0.50	110
o-Xylene	0.50	107
Styrene	0.50	99
1,1,2,2-Tetrachloroethane	0.50	115
1,3,5-Trimethylbenzene	0.50	110
1,2,4-Trimethylbenzene	0.50	107
1,3-Dichlorobenzene	0.50	102
1,4-Dichlorobenzene	0.50	104
Chlorotoluene	0.50	83
1,2-Dichlorobenzene	0.50	102
1,2,4-Trichlorobenzene	0.50	97
Hexachlorobutadiene	0.50	91

Q = Exceeds Quality Control limits of 70% to 130%.

Container Type: NA

Surrogates	% Recovery	Method Limits
Otaffluorotoluene	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

Method Spike
Well GH1028

MEMORANDUM

(27)

TO: File, 933-1280.1703, Norseland Mobile Estates

March 10, 1995

FR: A. Jensen *aj*

RE: Mobile Home Skirt and Soil Gas Data - Sampled 09/23/93 - VOC TICs only

INTRODUCTION

This memorandum presents the results of data validation and review of air sampling at twenty mobile home locations listed in Table 1. This memorandum includes only the tentatively identified compound (TIC) results for the volatiles analyses. The target compound list analytes were reviewed previously under a separate cover. Soil gas probes 1.5 meters in length were installed angled beneath each home to depth of approximately 1 meter below ground surface using procedures described in Golder's Technical Procedure 2.2-4, Sampling and Analysis of Soil Gases. In addition, undisturbed air samples from the crawl space beneath each mobile home were sampled. All samples were collected in 6 liter SUMMA® canister and sent to Air Toxics LTD., Folsom, California and analyzed for VOCs.

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced method specified in Table 1. Attachments 1 through 5 provide the following information as indicated below:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

Precision. Goals for precision were met. Duplicate analyses were provided for each analytical method.

Accuracy. Goals for accuracy were not evaluated.

Method Blank: Goals for contaminant free blanks were met for all analyses. A method blank was prepared for each batch of analyses for each analytical method.

Field Blank: Goals for contaminant free field blanks were met for all VOC TICS.

Detection Limits. Detection limit goals were not evaluated for the VOC TICS.

Data Completeness: The data package was 100 percent complete for all requested analyses. A total of thirty-nine samples were validated in this data package with a total of 117 determinations reported, all of which were deemed valid.

SUMMARY

The data can be used without qualification: All parameters are acceptable with no qualification required for their intended use.

Table 1

Sample Locations

Sample Identification	Type	Method Reporting Limit	Analysis
FIELD BLANK			
LOT #39			
LOT #60			
LOT #61			
LOT #63			
LOT #64			
LOT #65			
LOT #66			
LOT #119			
LOT #121			
LOT #122			
LOT #123			
LOT #125			
LOT #135			
LOT #136			
LOT #134			
LOT #56			
LOT #55			
LOT #54			
LOT #53			
LOT #52			
LOT #51			
LOT #50			
LOT #49			
LOT #48			
LOT #47			
LOT #46			
LOT #44			
LOT #42			

SOIL GAS PROBES WERE ANALYZED FOR VOCs ONLY. SKIRT SAMPLES WERE ANALYZED FOR BOTH VOCs AND PERMANENT GASES

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- U - Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ - Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J - Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- UR - Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

ATTACHMENT 2

SUMMARY OF DATA QUALIFICATIONS

ATTACHMENT 3
ANNOTATED LABORATORY REPORTS

DATA QUALIFICATION SUMMARY

SDG: 9409275C, 9409276C	REVIEWER: A. JENSEN	DATE: 3-10-95	PAGE <u>1</u> OF <u>1</u>
COMMENTS: VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS TO-14			
COMPOUND/ ANALYTE	QUALIFIER	SAMPLES AFFECTED (SOIL and SKIRT)	REASON
NO QUALIFICATIONS REQUIRED			

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SOIL

ID#: 9409275C-02A

EPA METHOD TO-14 : GC/MS Full Scan

TENTATIVELY IDENTIFIED COMPOUNDS

File Name:

F100306

Date of Collection: 9/23/94

Dil. Factor:

4.0

Date of Analysis: 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

verified at
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #39-SKIRT

ID#: 9409275C-03A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100307	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

verified aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SOIL

ID#: 9409275C-04A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100314 **Date of Collection:** 9/23/94
Dil. Factor: 2.2 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	7.4
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	107	70-130

verified by
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #60-SKIRT

ID#: 9409275C-05A

EPA METHOD TO-14 : GC/MS Full Scan

TENTATIVELY IDENTIFIED COMPOUNDS

File Name:	F100308	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	110	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SOIL

ID#: 9409275C-06A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100309 **Date of Collection:** 9/23/94
Dil. Factor: 2.2 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	12
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

verified aj
 3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #61-SKIRT

ID#: 9409275C-07A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100310	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SOIL

ID#: 9409275C-08A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:

F100419

Date of Collection: 9/23/94

Dil. Factor:

11

Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #63-SKIRT

ID#: 9409275C-09A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:

F100312

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SOIL

ID#: 9409275C-10A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100313 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #64-SKIRT

ID#: 9409275C-11A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100315 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130

verified aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SOIL

ID#: 9409275C-12A

EPA METHOD TO-14 : GC/MS Full Scan

TENTATIVELY IDENTIFIED COMPOUNDS

File Name:	F100416	Date of Collection:	9/23/94
Dil. Factor:	1.6	Date of Analysis:	10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	4.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #65-SKIRT

ID#: 9409275C-13A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name:

F100418

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	5.1
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

verified aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SOIL

ID#: 9409275C-14A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100405	Date of Collection:	9/23/94
Dil. Factor:	1.3	Date of Analysis:	10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	7.3
Tetrahydrofuran	109-99-9	NA	3.5
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	125	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #66-SKIRT

ID#: 9409275C-15A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name:**F100406****Date of Collection:** 9/23/94**Dil. Factor:****1.4****Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	7.0
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SOIL

ID#: 9409275C-16A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100411 Date of Collection: 9/23/94
 Dil. Factor: 1.6 Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	8.6
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #119-SKIRT

ID#: 9409275C-17A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100409 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	3.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	105	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SOIL

ID#: 9409275C-18A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100413	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	24
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	104	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #121-SKIRT

ID#: 9409275C-19A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100414 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

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aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SOIL

ID#: 9409275C-20A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100415 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	13
Tetrahydrofuran	109-99-9	NA	8.4
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #122-SKIRT

ID#: 9409276C-01A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100424	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	26
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

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ATTACHMENT 4

LABORATORY NARRATIVE and CHAIN-OF-CUSTODY DOCUMENTATION


AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9409275C

Work Order Summary

CLIENT: Mr. Michael Lubrecht
 Golder Associates
 4104 148th Ave. NE
 Redmond, WA 98052

BILL TO: Same

PHONE: 206-883-0777
FAX: 206-882-5498
DATE RECEIVED: 9/27/94
DATE COMPLETED: 2/21/95

INVOICE # 6049
P.O. # 11944
PROJECT # 933-1280 KITSAP Co.
AMOUNT\$: \$335.00

FRACTION #	NAME	TEST	RECEIPT	VAC./PRES.	PRICE
01A	Field Blank	TO-14/TIC's	2.0 "Hg	\$50.00	
02A	LOT #39-SOIL	TO-14/TIC's	20 "Hg	\$15.00	
03A	LOT #39-SKIRT	TO-14/TIC's	0.5 "Hg	\$15.00	
04A	LOT #60-SOIL	TO-14/TIC's	5.5 "Hg	\$15.00	
05A	LOT #60-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00	
06A	LOT #61-SOIL	TO-14/TIC's	11.5 "Hg	\$15.00	
07A	LOT #61-SKIRT	TO-14/TIC's	2.5 "Hg	\$15.00	
07B	LOT #61-SKIRT Duplicate	TO-14/TIC's	2.5 "Hg	NC	
08A	LOT #63-SOIL	TO-14/TIC's	3.0 "Hg	\$15.00	
09A	LOT #63-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00	
10A	LOT #64-SOIL	TO-14/TIC's	0.5 "Hg	\$15.00	
11A	LOT #64-SKIRT	TO-14/TIC's	2.0 "Hg	\$15.00	
12A	LOT #65-SOIL	TO-14/TIC's	4.0 "Hg	\$15.00	
12B	LOT #65-SOIL Duplicate	TO-14/TIC's	4.0 "Hg	NC	
13A	LOT #65-SKIRT	TO-14/TIC's	2.0 "Hg	\$15.00	
14A	LOT #66-SOIL	TO-14/TIC's	0 "Hg	\$15.00	
15A	LOT #66-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00	

CERTIFIED BY: Michael Lubrecht
 Laboratory Director

DATE: 5/31/95180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
 (916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

WORK ORDER #: 9409275C

Work Order Summary Continued

CLIENT: Mr. Michael Lubrecht
 Golder Associates
 4104 148th Ave. NE
 Redmond, WA 98052

BILL TO: Same

PHONE: 206-883-0777 **INVOICE #** 6049
FAX: 206-882-5498 **P.O. #** 11944
DATE RECEIVED: 9/27/94 **PROJECT #** 933-1280 KITSAP CO
DATE COMPLETED: 2/21/95

FRACTION #	NAME	TEST	RECEIPT	VAC./PRES.	PRICE
16A	LOT #119-SOIL	TO-14/TIC's	5.5 "Hg	\$15.00	
17A	LOT #119-SKIRT	TO-14/TIC's	2.5 "Hg	\$15.00	
18A	LOT #121-SOIL	TO-14/TIC's	1.0 "Hg	\$15.00	
19A	LOT #121-SKIRT	TO-14/TIC's	2.0 "Hg	\$15.00	
20A	LOT #122-SOIL	TO-14/TIC's	1.0 "Hg	\$15.00	
21A	Method Spike	TO-14/TIC's	NA	NC	
22A	Lab Blank	TO-14/TIC's	NA	NC	
22B	Lab Blank	TO-14/TIC's	NA	NC	

LAB NARRATIVE:

Sample LOT #60-SOIL had a leaking valve. Data reported as estimated.

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SOIL

ID#: 9409276C-02A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100425 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	4.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #123-SKIRT

ID#: 9409276C-03A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100426 Date of Collection: 9/23/94
 Dil. Factor: 1.6 Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	7.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SOIL

ID#: 9409276C-04A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:

F100427

Date of Collection: 9/23/94

Dil. Factor:

1.8

Date of Analysis: 10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	17
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #125-SKIRT

ID#: 9409276C-05A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100428	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis: 10/5/94	

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	5.5
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	109	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SOIL

ID#: 9409276C-06A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100429	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	3.7
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #135-SKIRT

ID#: 9409276C-07A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100513	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	12
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

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3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SOIL

ID#: 9409276C-08A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100514	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	18
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	5.5

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	115	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

verified as
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #136-SKIRT

ID#: 9409276C-09A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100515 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	130
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	117	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SOIL

ID#: 9409276C-10A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100516	Date of Collection:	9/23/94
Dil. Factor:	1.3	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	9.0
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	111	70-130

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AIR TOXICS LTD.

SAMPLE NAME: LOT #134-SKIRT

ID#: 9409276C-11A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100605	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	14
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

verified by
3/12/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SOIL

ID#: 9409276C-12A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:

F100607

Date of Collection: 9/23/94

Dil. Factor:

1.4

Date of Analysis: 10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	11
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

verified at
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #56-SKIRT

ID#: 9409276C-13A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100608 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	9.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	94	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

verified aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SOIL

ID#: 9409276C-14A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100609 **Date of Collection:** 9/23/94
Dil. Factor: 2.3 **Date of Analysis:** 10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	11
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

verified by
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #55-SKIRT

ID #: 9409276C-15A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100610	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	5.5
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

verified by
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SOIL

ID#: 9409276C-16A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100611 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	33
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	102	70-130

verified by
3/12/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #54-SKIRT

ID#: 9409276C-17A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: F100705 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/7/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	8.0
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

Page 20

verified by
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SOIL

ID#: 9409276C-18A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	F100708	Date of Collection:	9/23/94
DII, Factor:	1.4	Date of Analysis: 10/7/94	

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	12
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	126	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

verified aj
3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #53-SKIRT

ID#: 9409276C-19A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: F100613 Date of Collection: 9/23/94
 Dil. Factor: 1.4 Date of Analysis: 10/6/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	14
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	98	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

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verified aj
 3/10/95

AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SOIL

ID#: 9409276C-20A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name:	F100709	Date of Collection:	9/23/94
Dil. Factor:	1.4	Date of Analysis:	10/7/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	9.9
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130

verified by
 3/12/95


AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9409276C

Work Order Summary

CLIENT: Mr. Michael Lubrecht
 Golder Associates
 4104 148th Ave. NE
 Redmond, WA 98052

BILL TO: Same

PHONE: 206-883-0777
FAX: 206-882-5498
DATE RECEIVED: 9/27/94
DATE COMPLETED: 2/21/95

INVOICE # 6048
P.O. # 11944
PROJECT # 933-1280 KITSAP Co.
AMOUNT\$: \$300.00

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>PRICE</u>
01A	LOT #122-SKIRT	TO-14/TIC's	2.5 "Hg	\$15.00
02A	LOT #123-SOIL	TO-14/TIC's	3.0 "Hg	\$15.00
03A	LOT #123-SKIRT	TO-14/TIC's	4.0 "Hg	\$15.00
04A	LOT #125-SOIL	TO-14/TIC's	8.0 "Hg	\$15.00
05A	LOT #125-SKIRT	TO-14/TIC's	2.5 "Hg	\$15.00
06A	LOT #135-SOIL	TO-14/TIC's	2.5 "Hg	\$15.00
07A	LOT #135-SKIRT	TO-14/TIC's	0.5 "Hg	\$15.00
08A	LOT #136-SOIL	TO-14/TIC's	3.0 "Hg	\$15.00
09A	LOT #136-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00
10A	LOT #134-SOIL	TO-14/TIC's	0 "Hg	\$15.00
11A	LOT #134-SKIRT	TO-14/TIC's	3.5 "Hg	\$15.00
11B	LOT #134-SKIRT Duplicate	TO-14/TIC's	3.5 "Hg	NC
12A	LOT #56-SOIL	TO-14/TIC's	0.5 "Hg	\$15.00
13A	LOT #56-SKIRT	TO-14/TIC's	1.0 "Hg	\$15.00
14A	LOT #55-SOIL	TO-14/TIC's	12.5 "Hg	\$15.00
15A	LOT #55-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00
16A	LOT #54-SOIL	TO-14/TIC's	1.0 "Hg	\$15.00

CERTIFIED BY: Daniel J. Turner
 Laboratory Director

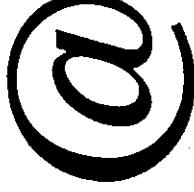
DATE: 2/21/95180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
 (916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

WORK ORDER #: 9409276C

Work Order Summary Continued

CLIENT:	Mr. Michael Lubrecht Golder Associates 4104 148th Ave. NE Redmond, WA 98052	BILL TO: Same
PHONE:	206-883-0777	INVOICE # 6048
FAX:	206-882-5498	P.O. # 11944
DATE RECEIVED:	9/27/94	PROJECT # 933-1280 KITSAP Co.
DATE COMPLETED:	2/21/95	

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	PRICE
17A	LOT #54-SKIRT	TO-14/TIC's	2.0 "Hg	\$15.00
17B	LOT #54-SKIRT Duplicate	TO-14/TIC's	2.0 "Hg	NC
18A	LOT #53-SOIL	TO-14/TIC's	0.5 "Hg	\$15.00
19A	LOT #53-SKIRT	TO-14/TIC's	1.5 "Hg	\$15.00
20A	LOT #52-SOIL	TO-14/TIC's	0.5 "Hg	\$15.00
21A	Method Spike	TO-14/TIC's	NA	NC
22A	Lab Blank	TO-14/TIC's	NA	NC
22B	Lab Blank	TO-14/TIC's	NA	NC
22C	Lab Blank	TO-14/TIC's	NA	NC
22D	Lab Blank	TO-14/TIC's	NA	NC



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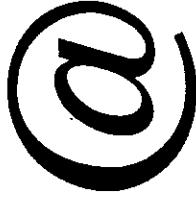
180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

N# 001862

CHAIN-OFF-CUSTODY RECORD

Page 1 of 6

Contact Person <u>MICHAEL LUBRECHT</u>	Project Info:					
Company <u>GOLDER ASSOCIATES</u>	P.O. # <u>933-1280</u>	Turn Around Time:				
Address <u>4104 - 148th Ave NE City REDMOND State WA Zip 98052</u>	Project # <u>933-1280</u>	<input checked="" type="checkbox"/> Normal				
Phone <u>(206) 883-0777</u>	Project Name <u>KITSAP CO / NURSELAND RTAs</u>	<input type="checkbox"/> Rush				
	Specify <u>TDS,</u>	Specify <u>TDS,</u>				
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum		
①A	FIELD BLANK	9/23/94 8:15a	TO-14, ASTM D-1946 Fixed Gases	Initial Final Receipt		
②A	LOT # 39 - SOIL	9/23/94 8:17a	" "	2.0" Hg		
③A	LOT # 39 - SKIRT	9/23/94 8:17a	" " ASTM D-1946 F.G.	0.5" Hg		
④A	LOT # 60 - SOIL	9/23/94 8:26a	" "	5.5" Hg		
⑤A	LOT # 60 - SKIRT	9/23/94 8:26a	" " ASTM D-1946 F.G.	1.5" Hg		
⑥A	LOT # 61 - SOIL	9/23/94 8:32a	" "	11.5" Hg		
⑦A/B	LOT # 61 - SKIRT	9/23/94 8:32a	" " ASTM D-1946 F.G.	2.5" Hg		
⑧A	LOT # 63 - SOIL	9/23/94 8:41a	" "	3.0" Hg		
⑨A	LOT # 63 - SKIRT	9/23/94 8:41a	" " ASTM D-1946 F.G.	1.5" Hg		
⑩A	LOT # 64 - SOIL	9/23/94 8:48a	" "	0.5" Hg		
Collected By: Print <u>DAVID SLATER</u>	Signature <u>DAVID SLATER</u>	Received By: (Signature) Date/Time <u>9/26/94 10:00 AM</u>	Notes: <u>ASTM D-1946 Fixed gas</u>			
Relinquished By: (Signature) Date/Time <u>David Slater 9/26/94 10:00 AM</u>	Received By: (Signature) Date/Time <u>9/26/94 10:00 AM</u>	for skirt samples only.				
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time					
Shipper Name <u>FED-X</u>	Air Bill # <u>3978912253</u>	Opened By: Date/Time	Temp. (°C)	Condition	Custody Seals Intact?	Work Order # <u>C</u>
Lab Use Only		Yes	No	(None)	(None)	

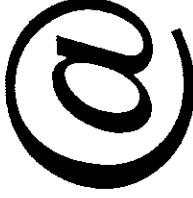


AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OFF-CUSTODY RECORD

Page 2 of 5

Contact Person Company Address Phone	MICHAEL LUBRECHT GOLDR ASSOCIATES 4104-148 th AVE NE City REDMOND State WA Zip 98052 (206) 883-0777 FAX (206) 882-5498			Project Info: P.O. # <u>933 - 1280</u> Project # <u>933 - 1280</u> Project Name <u>K/T/SAP Co.</u> <u>NOSSELAND RI-FS</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <input type="checkbox"/> Specify <u>TDS</u>
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
11A	LOT #64 - SKIRT	9/23/94 8:48a	To-14, ASTRI D-1946 FG.	Initial Final	Receipt
12A	LOT #65 - SOIL	9/23/94 8:55a	"		2.0" Hg
13A	LOT #65 - SKIRT	9/23/94 8:55a	"		4.0" Hg
14A	LOT #66 - SOIL	9/23/94 9:05a	"		2.0" Hg
15A	LOT #66 - SKIRT	9/23/94 9:05a	"		0.1" Hg
16A	LOT #119 - SOIL	9/23/94 9:15a	"		1.5" Hg
17AB	LOT #119 - SKIRT	9/23/94 9:15a	"		5.5" Hg
18A	LOT #121 - SOIL	9/23/94 9:52a	"		2.5" Hg
19A	LOT #121 - SKIRT	9/23/94 9:52a	"		1.0" Hg
20A	LOT #122 - SOIL	9/23/94 9:49a	"		2.0" Hg
Collected By:	Print: DAVID SLATER	Signature:	Notes: ASTRI D-1946 FG for "SK100" samples only.	Work Order # C	
Relinquished By:	(Signature) Date/Time: 9/26/94 11:00 AM	Received By: (Signature) Date/Time: 9/26/94 11:00 AM			
Relinquished By:	(Signature) Date/Time:	Received By: (Signature) Date/Time:			
Relinquished By:	(Signature) Date/Time:	Received By: (Signature) Date/Time:			
Shipper Name	Air Bill # <u>3998912253</u>	Opened By: <u>SDB</u> Date/Time <u>09/26/94 08:00 AM</u>	Temp. (°C) <u>6000</u> Condition <u>GOOD</u>	Custody Seals Intact? Yes No <u>No</u> <u>None</u>	Work Order # C
Lab Use Only					



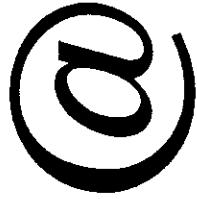
AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Nº 001856

Page 3 of 6

Contact Person Company Address Phone	MICHAEL LUBRECHT GOLDEER ASSOCIATES 4104 - 148 th Ave. N.E. City: REDMOND State: WA Zip: 98052 (206) 883-0777 FAX (206) 882-5498	Project info: P.O. # _____ Project # 933-1280 Project Name KITSAP CO. NORSELAND RJ. ES	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify _____				
Lab I.D.	Field Sample ID.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial Final Receipt			
01A	LOT #122 - SKIRT	9/23/94 9:49	TO-14, ASTM D-1946 F.G.	2.5" Hg			
02A	LOT #123 - SOIL	9/23/94 9:41a	"	3.0" Hg			
03A	LOT #123 - SKIRT	9/23/94 9:41a	" ASTM D-1946 F.G.	4.0" Hg			
04A	LOT #125 - SOIL	9/23/94 9:32a	"	8.0" Hg			
05A	LOT #125 - SKIRT	9/23/94 9:32a	" ASTM D 1946 F.G.	2.5" Hg			
06A	LOT #135 - SOIL	9/23/94 10:23a	"	2.5" Hg			
07A	LOT #135 - SKIRT	9/23/94 10:23a	" ASTM D 1946 F.G.	0.5" Hg			
08A	LOT #136 - SOIL	9/23/94 10:18a	"	3.0" Hg			
09A	LOT #136 - SKIRT	9/23/94 10:18a	" ASTM D 1946 F.G.	1.5" Hg			
10A	LOT #134 - SOIL	9/23/94 10:09a	"	0" Hg			
Collected By: Print DAVID SLEATER	Signature: <u>David Slater</u>	Received By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Received By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Notes: ASTM D 1946 on "Skirt" standards			
Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Received By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94 11:00a	Work Order # C-409276A			
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time	Relinquished By: (Signature) Date/Time	Relinquished By: (Signature) Date/Time	Only			
Shipper Name: ECD-X	Air Bill #: 3978912253	Opened By: 2861	Date/Time: 27sep94	Temp. (°C): 600D	Condition: Good	Custody Seals Intact? Yes No <input checked="" type="checkbox"/> None	Work Order # C-409276A



AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

CHAIN-OFF-CUSTODY RECORD

No 001857

Page 4 of 6

Contact Person <u>MICHAEL LOBRECHT</u>		Project info:		Turn Around Time:	
Company <u>Golder Associates</u>	Address <u>4104-148th Ave NE</u>	P.O. # <u>933-1280</u>	Project # <u>98052</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush _____
Phone <u>(206) 883-0777</u>	City <u>REDMOND</u>	Project Name <u>KITSAP Co.</u>	State <u>WA</u>	Specify _____	
			Zip <u>98052</u>		
			Area <u>5498</u>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Vacuum Receipt
11A	LOT #134 - SKIRT.	9/23/94 10:09a	TO-14 , ASTM D-1946 F. G.	3.5 "Hg	
12A	LOT #56 - SOIL	9/23/94 10:32a	" ,	0.5 "Hg	
13A	LOT #56 - SKIRT	9/23/94 10:32a	" ,	1.0 "Hg	
14A	LOT #55 - SOIL	9/23/94 10:41a	" ,	12.5 "Hg	
15A	LOT #55 - SKIRT.	9/23/94 10:41a	" ,	1.5 "Hg	
16A	LOT #54 - SOIL	9/23/94 10:55a	" ,	1.05 "Hg	
17A/B	LOT #54 - SKIRT	9/23/94 10:55a	" ,	2.0 "Hg	
18A	LOT #53 - SOIL	9/23/94 11:10a	" ,	0.5 "Hg	
19A	LOT #53 - SKIRT	9/23/94 11:10a	" ,	1.5 "Hg	
20A	LOT #52 - SOIL	9/23/94 11:17a	" ,	0.5 "Hg	
Collected By: Print <u>David Slater</u>	Signature <u>David L Slater</u>	Notes: ASTM D-1946 Fixed gases for skirt only fences.			
Relinquished By: (Signature) <u>David L Slater</u>	Date/Time <u>9/26/94 11:02a</u>	Received By: (Signature) <u>John H. Johnson</u>	Date/Time <u>27sep94 0835</u>		
Relinquished By: (Signature) <u>David L Slater</u>	Date/Time <u>9/26/94 11:02a</u>	Received By: (Signature) <u>John H. Johnson</u>	Date/Time <u>27sep94 0835</u>		
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time				
Shipper Name <u>FCD-X</u>	Air Bill # <u>3978912253</u>	Opened By: <u>David L Slater</u>	Temp. (°C)	Condition	Custody Seals Intact?
Lab Use Only				Yes No <input checked="" type="checkbox"/>	Work Order # <u>940927RA</u>

ATTACHMENT 5
DATA VALIDATION SUPPORTING DOCUMENTATION

ORGANIC DATA VALIDATION SUMMARY

PROJECT NO.: 933-1280 KitsapCo	SITE: Norseland
LABORATORY: Air Toxics LTD	SDG: 9409275C, 9409276C
SAMPLES/MATRIX/ANALYSES:	
See Table 1 in Memorandum	

DATA ASSESSMENT SUMMARY

Review Item	VOA	BNA	PEST PCB	PHOS. PEST	CHLOR. HERB	DIOXIN FURAN	GC	GC
1. Data Completeness								
2. Holding Times	X							
3. GC/MS Tuning								
4. Instrument Performance								
5. Calibrations								
6. Blanks	X							
7. Surrogates	X							
8. MS/MSD								
9. Internal Standards								
10. Compound Identification								
11. Tent. Ident. Cmpds (TIC)								
12. Result Verification								
13. Detection Limits								
14. System Performance								
15. Overall Assessment								

O = Data had no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems but do not affect data.

Comments/Qualified Results:

Validated by: A. Jensen Date: 3/10/95

Reviewed by: _____ Date: _____

ORGANIC DATA VALIDATION SUMMARY

Acceptable
Yes No

1. Data Completeness (check if present)

- | | |
|--|--|
| <input type="checkbox"/> Case narrative
<input checked="" type="checkbox"/> Chain of Custody
<input type="checkbox"/> Sample Analysis Request
<input checked="" type="checkbox"/> Sample Results
<input type="checkbox"/> Detection Limits
<input type="checkbox"/> GC/MS Tuning
<input type="checkbox"/> Initial Calibration Data
<input type="checkbox"/> Continuing Calibration Data | <input checked="" type="checkbox"/> Blank Results
<input checked="" type="checkbox"/> Surrogate Results
<input type="checkbox"/> MS/MSD Results
<input type="checkbox"/> Internal Standards Performance
<input type="checkbox"/> Raw Data
<input type="checkbox"/> Sample Preparation Data
<input type="checkbox"/> Standards Preparation Data |
|--|--|

Comments/Action Taken: _____

2. Holding Times (check all that apply)

- Unpreserved VOA samples analyzed in 7 days from collection
- Preserved VOA samples analyzed in 14 days from collection
- BNA samples extracted in 7 days (14 days soils) from collection
- BNA extracts analyzed in 40 days from extraction
- Pest/PCB samples extracted in 7 days (14 days soils) from collection
- Pest/PCB extracts analyzed in 40 days from extraction
- Air samples (VDA) analyzed in 14 days from collection

Qualify as estimated (J/U) all results analyzed past the holding time limits listed above but within 2x the limit. Qualify detects as estimated (J) and non-detects unusable (UR) for results analyzed greater than 2x the above limits.

Comments/Qualified Results: _____

3. GC/MS Tuning

- GC/MS tuning performed
- GC/MS tuning within control limits
- GC/MS tuning outside control limits (qualify R/UR)

Comments/Qualified Results: N/A _____

ORGANIC DATA VALIDATION SUMMARY

Acceptable	
Yes	No

4. Instrument Performance

- DDT Retention Time Acceptable (packed columns) / Resolution Acceptable (All Columns) (if no, R detects)
- Standard Checks within Retention Time Window (if no, check against expanded windows and if outside, qualify R/UR)
- DDT and/or Endrin Breakdowns > 20% (J/UR DDT and Endrin, NJ all breakdown product hits)
- DBC, TCMX or DCBP retention time checks within SOW limits (if no, R/UR)

Comments/Qualified Results: N/A

5. Initial and Continuing Calibration

GC/MS Data

- Initial calibration performed
 - Initial calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
 - Initial calibration RSDs $\leq 30\%$ for all compounds (if no, J/UJ)
 - Continuing calibration performed
 - Continuing calibration RRFs ≥ 0.05 for all compounds (if no, J/UR)
 - Continuing calibration %D $\leq 25\%$ for all compounds (if no, J/UJ)
- Pesticide/PCB data
- RSD $\leq 10\%$ for performance checks (if no, J detects)
 - All standards analyzed prior to sample analysis, confirmation standards analyzed at proper frequency
 - Continuing calibration %D $\leq 15\%$ for quantitation ($\leq 20\%$ for confirmation) (if no, J all detects)

Comments/Qualified Results: N/A

6. Blanks X

Method blanks analyzed

Common Laboratory Contaminants Detected

- Methylene chloride
- Acetone detected
- Phthalates detected (list or attach summary sheet)
- TICs detected (list or attach summary sheet)

Toluene

2-Butanone

Qualify sample results <10x above as U at SQL

Non-common Laboratory Contaminants

- Other TCL compounds detected (list or attach summary sheet)

Qualify sample results <5x above as U at SQL

Comments/Qualified Results: Blanks were all non-detects

ORGANIC DATA VALIDATION SUMMARY

Acceptable			
Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No

7. Surrogates

Note: Surrogate limits apply if at least one volatile or pesticide/PCB surrogate is out of specification and at least two semivolatile surrogates are out of specification.

- Surrogates analyzed
- Surrogate recoveries within method control limits
- Surrogate recoveries above method control limits (J detects only)
- Surrogate recoveries below method control limits but $\geq 10\%$ (J/UJ)
- Surrogate recoveries below 10% (J/UR)

Surrogates were all within control limits.

8. Matrix Spike/Matrix Spike Duplicate

- MS/MSD analyzed
- MS/MSD recoveries within method control limits
- MS/MSD recoveries above method control limits (J detects only)
- MS/MSD recoveries below method control limits but $\geq 10\%$ (J/UJ)
- MS/MSD recoveries below 10%, and surrogates are out (J/UR)

Comments/Qualified Results: MS recovery not reported.

9. Internal Standards Performance

- Internal standards added to all samples and QC
- Internal standard areas within control limits
- Internal standard areas outside control limits but greater than 10% (J/UJ)
- Internal standard areas are zero or less than 10% (J/UR)
- Internal standard RTs within ± 30 second windows (if no, J/UJ)

Comments/Qualified Results: N/A

10. Compound Identification

- Library search data provided for positive results (if no and data is required, request from the laboratory)
- Positive results within RT criteria for dual column confirmation (Pesticide/PCB data only) (if no, qualify detect as U)
- Compound ID within ± 0.08 RRT of standard (if no, qualify as J if spectral match okay)
- Mass spectral match acceptable (if no, qualify as R)

Comments/Qualified Results: N/A

ORGANIC DATA VALIDATION SUMMARY

	Acceptable	
	Yes	No

11. Tentatively Identified Compounds (TIC)

- TIC's searched (10/20 largest non-Aldol VOA's/Semi-VOA's)
- TIC's identified properly
- TIC's present in blank and samples (qualify according to 5x rule)
- Common laboratory contaminants reported as TIC's (qualify the following as rejected [CO₂ (m/z 44), siloxanes (m/z 73), diethyl ether, hexane, freons, phthalates <100 ug/L or <4000 ug/Kg, cyclohexene derivatives, aldehydes or hydroxy ketones and hydroxy aldehydes])
- Qualify valid TICs as JN

Comments/Qualified Results: N/A

12. Result Verification

- All results supported in raw data
- Transcription errors identified (note constituent(s) and changes below)
- Calculation errors identified (note constituent(s) and changes below)

Comments/Qualified Results: N/A

13. Detection Limits

- Sample quantitation limits (SQLs) meet the project requirements (note discrepancies below)

Comments/Qualified Results: _____

14. System Performance

- Baseline anomalies noted which affect quantitation (J/UJ)
- High background MS levels noted which affect quantitation (J/UJ)
- Extraneous or coeluting peaks affecting quantitation (J/UJ)
- Poor resolution (J/UJ)
- Peak tailing/peak splitting affecting quantitation (J/UJ)

Comments/Qualified Results: N/A

AIR TOXICS LTD.

SAMPLE NAME: LOT #52-SKIRT

ID#: 9409277C-01A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100307 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	3.2 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.4 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	82	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	90	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SOIL

ID#: 9409277C-02A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100308 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	13 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	2.1 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	108	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #51-SKIRT

ID#: 9409277C-03A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100309 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	38 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.6 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	90	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	79	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SOIL

ID#: 9409277C-04A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS****File Name:****7100310****Date of Collection: 9/23/94****Dil. Factor:****1.8****Date of Analysis: 10/3/94**

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	95 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	10 B

B = Compound present in laboratory blank, background subtraction not performed.**Container Type: 6 Liter SUMMA Canister**

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #50-SKIRT

ID#: 9409277C-05A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	7100311	Date of Collection:	9/23/94
Dil. Factor:	1.5	Date of Analysis:	10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	17 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	2.1 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	122	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SOIL

ID#: 9409277C-06A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100312 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	6.3 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	71	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #49-SKIRT

ID#: 9409277C-07A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100313 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	31 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.7 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	119	70-130
4-Bromofluorobenzene	71	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SOIL

ID#: 9409277C-08A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100407 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	14
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.1

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	97	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	88	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SOIL Duplicate

ID#: 9409277C-08B

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100409 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	25
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	3.7

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	75	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #48-SKIRT

ID#: 9409277C-09A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS****File Name:****7100408****Date of Collection:** 9/23/94**Dil. Factor:****1.4****Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	20
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	2.4

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SOIL

ID#: 9409277C-10A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100410 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	30
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	4.8

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	85	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	73	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #47-SKIRT

ID#: 9409277C-11A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100411 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	21
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.7

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	93	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	82	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SOIL

ID#: 9409277C-12A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100412 Date of Collection: 9/23/94
 Dil. Factor: 2.1 Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	30
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	2.5

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	76	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SOIL Duplicate
 ID#: 9409277C-12B
EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100413 **Date of Collection:** 9/23/94
Dil. Factor: 2.1 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	21
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.6

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	89	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #46-SKIRT

ID#: 9409277C-13A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100414 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	18
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	2.4

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	80	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	78	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SOIL

ID#: 9409277C-14A

EPA METHOD TO-14 : GC/MS Full Scan

TENTATIVELY IDENTIFIED COMPOUNDS

File Name:	7100505	Date of Collection:	9/23/94
Dil. Factor:	2.4	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	3.5 B

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	82	70-130
Toluene-d8	128	70-130
4-Bromofluorobenzene	72	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #44-SKIRT

ID#: 9409277C-15A

EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100506 **Date of Collection:** 9/23/94
Dil. Factor: 1.5 **Date of Analysis:** 10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	12 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	1.5

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	130	70-130
4-Bromofluorobenzene	74	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SOIL

ID#: 9409277C-16A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	7100508	Date of Collection:	9/23/94
Dil. Factor:	2.1	Date of Analysis:	10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	33 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	6.1

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	84	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	80	70-130

AIR TOXICS LTD.

SAMPLE NAME: LOT #42-SKIRT

ID#: 9409277C-17A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100509 **Date of Collection:** 9/23/94
Dil. Factor: 1.4 **Date of Analysis:** 10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	28 B
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	3.6

B = Compound present in laboratory blank, background subtraction not performed.

Container Type: 6 Liter SUMMA Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	83	70-130
Toluene-d8	116	70-130
4-Bromofluorobenzene	74	70-130

AIR TOXICS LTD.

SAMPLE NAME: Method Spike

ID#: 9409277C-18A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:

7100402

Date of Collection: NA

Dil. Factor:

1.0

Date of Analysis: 10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Spiked
Tetrahydrofuran	109-99-9	NA	Not Spiked
2-Butanone	78-93-3	NA	Not Spiked

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	87	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	113	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277C-19A

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name: 7100304 Date of Collection: NA
 Dil. Factor: 1.0 Date of Analysis: 10/3/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	1.6
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	Calibrated	0.41 J

J = Below detection limit, but supported by Mass Spectra.

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	91	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	116	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277C-19B

**EPA METHOD TO-14 : GC/MS Full Scan
TENTATIVELY IDENTIFIED COMPOUNDS**

File Name:	7100404	Date of Collection:	NA
Dil. Factor:	1.0	Date of Analysis:	10/4/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	NA	Not Detected
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	81	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9409277C-19C

EPA METHOD TO-14 : GC/MS Full Scan

TENTATIVELY IDENTIFIED COMPOUNDS

File Name: 7100504 **Date of Collection:** NA
Dil. Factor: 1.0 **Date of Analysis:** 10/5/94

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetone	67-64-1	Calibrated	0.55
Tetrahydrofuran	109-99-9	NA	Not Detected
2-Butanone	78-93-3	NA	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	101	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	73	70-130



AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

No. **001862**

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CHAIN-OFF-CUSTODY RECORD

Contact Person <u>MICHAEL LUBRECHT</u>	Project info:		
Company <u>GOLDER ASSOCIATES</u>	P.O. #	Project # <u>933-1280</u>	
Address <u>4104 - 148th Ave NE</u> City <u>REDMOND</u> State <u>WA</u> Zip <u>98052</u>	Project Name	<u>KITSAP Co/ NARSELAND RSES</u>	
Phone <u>(206) 883-0777</u> FAX <u>(206) 882-5498</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify _____ <small>100%</small>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested
01A	FIELD BLANK	9/23/94 8:15a	TO-14, ASTM D-1946 Fixed Gases
02A	LOT # 39 - SOIL	9/23/94 8:17a	"
02A	LOT # 39 - SKIRT	9/23/94 8:17a	" , ASTM D-1946 F.G.
03A	LOT # 60 - SOIL	9/23/94 8:26a	"
03A	LOT # 60 - SKIRT	9/23/94 8:26a	" , ASTM D-1946 F.G.
06A	LOT # 61 - SOIL	9/23/94 8:32a	"
07A	LOT # 61 - SKIRT	9/23/94 8:32a	" , ASTM D-1946 F.G.
07A	LOT # 63 - SOIL	9/23/94 8:41a	"
07A	LOT # 63 - SKIRT	9/23/94 8:41a	" , ASTM D-1946 F.G.
10A	LOT # 64 - SOIL	9/23/94 8:48a	"
Collected By: Print <u>DAVID SLATER</u>		Signature <u>DAVID SLATER</u>	Notes: ASTM D-1946 Fixed gas for skirt samples only.
Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94		Received By: (Signature) Date/Time <u>David Slater</u> 7/26/94	Condition: <input checked="" type="checkbox"/> Custody Seals intact?
Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94		Received By: (Signature) Date/Time <u>David Slater</u> 7/26/94	Work Order # <u>940927575</u>
Relinquished By: (Signature) Date/Time <u>David Slater</u> 9/26/94		Received By: (Signature) Date/Time <u>David Slater</u> 7/26/94	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> None
Shipper Name <u>FED-X</u>		At Bill # <u>3978912253</u>	Date/Time <u>7/26/94</u> Temp. (°C) <u>600P</u>
		Opened By: <u>David Slater</u>	Condition: <input checked="" type="checkbox"/> Custody Seals intact?
		Received By: <u>David Slater</u>	Work Order # <u>940927575</u>



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No. 001860

CHAIN-OF-CUSTODY RECORD

Page 2 of 5

Contact Person MICHAEL GOLDER ASSOCIATES
Company GOLDER ASSOCIATES
Address 4104 - 148th AVE NE City REEDWOOD State WA Zip 98052
Phone (206) 883-5777 FAX (206) 882-5498

Project Info:	
P.O. #	933-1280
Project #	933-1280
Project Name	Norseman Rr-FS
Specify	TDS

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Canister Pressure / Vacuum Final	Receipt
1A	LOT #64 - SKIRT	9/23/94 8:48a	TO-14, ASST D-1946 F.G.			2.0" Hg
12A	LOT #65 - SOIL	9/23/94 8:55a	"			4.0" Hg
13A	LOT #65 - SKIRT	9/23/94 8:55a	" AST NY D-1946 F.G.			2.0" Hg
14A	LOT #66 - SOIL	9/23/94 9:05a	" "			0" Hg
15A	LOT #66 - SKIRT	9/23/94 9:05a	" AST NY D-1946 F.G.			1.5" Hg
16A	LOT #119 - SOIL	9/23/94 9:15a	" "			5.5" Hg
17A/B	LOT #119 - SKIRT	9/23/94 9:15a	" AST NY D-1946 F.G.			2.5" Hg
18A	LOT #121 - SOIL	9/23/94 9:52a	" "			1.0" Hg
19A	LOT #121 - SKIRT	9/23/94 9:52a	" AST NY D-1946 F.G.			2.0" Hg
20A	LOT #122 - SOIL	9/23/94 9:49a	" "			1.0" Hg
Collected By: Print: <u>DAVID SLATER</u>	Signature: <u>David L. Slater</u>	Received By: (Signature) <u>John S. Schaeffer</u> Date/Time <u>9/26/94 11:00 AM</u>	Condition: <u>23°C 100%</u>	Temp. (°C): <u>23°C</u>	Custody Seals Intact?: <u>Yes</u>	Work Order #: <u>9409275A</u>
Relinquished By: (Signature) <u>John S. Schaeffer</u> Date/Time <u>9/26/94 11:00 AM</u>	Received By: (Signature) <u>John S. Schaeffer</u> Date/Time <u>9/26/94 11:00 AM</u>	Condition: <u>23°C 100%</u>	Temp. (°C): <u>23°C</u>	Custody Seals Intact?: <u>Yes</u>	Work Order #: <u>9409275A</u>	
Relinquished By: (Signature) <u>John S. Schaeffer</u> Date/Time <u>9/26/94 11:00 AM</u>	Received By: (Signature) <u>John S. Schaeffer</u> Date/Time <u>9/26/94 11:00 AM</u>	Condition: <u>23°C 100%</u>	Temp. (°C): <u>23°C</u>	Custody Seals Intact?: <u>Yes</u>	Work Order #: <u>9409275A</u>	
Shipper Name: <u>FED-X</u>	Air Bill #: <u>39478912252</u>	Opened By: <u>Sell</u>	Date/Time: <u>9/26/94 11:00 AM</u>	Condition: <u>GOOD</u>	Custody Seals Intact?: <u>Yes</u>	Work Order #: <u>9409275A</u>



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CHAIN-OFF-CUSTODY RECORD

No. 001856
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Contact Person <u>MICHAEL LOBRECHT</u>	Project info:		
Company <u>GOLDER ASSOCIATES</u>	P.O. # <u>933-1280</u>	Project # <u>933-1280</u>	Turn Around Time:
Address <u>4104 - 148th Ave. NE City REEDWOOD State WA Zip 98052</u>	<input checked="" type="checkbox"/> Normal		
Phone <u>(206) 883-0777</u>	FAX <u>(208) 882-5498</u>	<input type="checkbox"/> Rush	Specify _____
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested
01A	LOT #122 - SKIRT	9/23/94 9:49	TO-14, ASTM D-1946 F.G.
02A	LOT #123 - SOIL	9/23/94 9:41a	"
03A	LOT #123 - SKIRT	9/23/94 9:41a	ASTM D-1946 F.G.
04A	LOT #125 - SOIL	9/23/94 9:32a	"
05A	LOT #125 - SKIRT	9/23/94 9:32a	ASTM D 1946 F.G.
06A	LOT #135 - SOIL	9/23/94 10:23a	"
07A	LOT #135 - SKIRT	9/23/94 10:23a	ASTM D 1946 F.G.
08A	LOT #136 - SOIL	9/23/94 10:18a	"
09A	LOT #136 - SKIRT	9/23/94 10:18a	ASTM D 1946 F.G.
10A	LOT #134 - SOIL	9/23/94 10:09a	"
Collected By: <u>David Slater</u>		Signature <u>DAVID SLATER</u>	Notes: ASTM D 1946 on "Screen" standard only.
Relinquished By: <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: <u>David Slater</u>	Date/Time <u>9/26/94 12:05p</u>
Relinquished By: <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: <u>David Slater</u>	Date/Time <u>9/26/94 12:05p</u>
Relinquished By: <u>David Slater</u>	Date/Time <u>9/26/94 11:00a</u>	Received By: <u>David Slater</u>	Date/Time <u>9/26/94 12:05p</u>
Shipper Name: <u>FE D-X</u>	Air Bill #: <u>397912255</u>	Opened By: <u>David Slater</u>	Date/Time <u>9/26/94 12:05p</u>
Lab Use Only		Condition: <u>Good</u>	Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None
		Work Order # <u>94092764</u>	



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CHAIN-OF-CUSTODY RECORD

No. **001857**
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Contact Person <u>MICHAEL LOBRECHT</u>	Project info: P.O. # <u>933-1280</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <input type="checkbox"/> Specify		
Company <u>GOLDER ASSOCIATES</u>	Project Name <u>KITSAP Co.</u>			
Address <u>4104-148th Ave NE</u>	City <u>REDMOND</u>	State <u>WA</u> Zip <u>98052</u>		
Phone <u>(206) 883-0777</u>	FAX <u>(206) 882-5498</u>	<u>NORSELAND RE-FS</u>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial Final Receipt
1/A	LOT #134 - SKIRT	9/23/94 10:09a	TO-14, ASTM D-1946 F.G.	3.5" Hg
12A	LOT #56 - SOIL	9/23/94 10:32a	" "	0.5" Hg
13A	LOT #56 - SKIRT	9/23/94 10:32a	" , ASTM D-1946 F.G.	1.0" Hg
14A	LOT #55 - SOIL	9/23/94 10:41a	" , " , ASTM D-1946 F.G.	12.5" Hg
15A	LOT #55 - SKIRT	9/23/94 10:41a	" , " , ASTM D-1946 F.G.	1.5" Hg
16A	LOT #54 - SOIL	9/23/94 10:55a	" , " , ASTM D-1946 F.G.	1.0" Hg
17A/B	LOT #54 - SKIRT	9/23/94 10:55a	" , " , ASTM D-1946 F.G.	2.0" Hg
18A	LOT #53 - SOIL	9/23/94 11:10a	" , " , ASTM D-1946 F.G.	0.5" Hg
19A	LOT #53 - SKIRT	9/23/94 11:10a	" , " , ASTM D-1946 F.G.	1.5" Hg
20A	LOT #52 - SOIL	9/23/94 11:17a	" , " , ASTM D-1946 F.G.	0.5" Hg
Collected By: Print <u>DAVID SLEATER</u>	Signature <u>David SLEATER</u>	Received By: (Signature) Date/Time <u>David SLEATER</u> <u>2755 P.M.</u>	Notes: <u>ASTM D-1946 Fixed gases</u>	
Relinquished By: (Signature) Date/Time <u>David SLEATER</u> <u>9/26/94 11:00a</u>	Received By: (Signature) Date/Time <u>David SLEATER</u> <u>2755 P.M.</u>	for <u>skirt</u> only <u>fences</u> .		
Relinquished By: (Signature) Date/Time <u>None</u>	Received By: (Signature) Date/Time <u>None</u>			
Shipper Name <u>FCI-X</u>	Air Bill # <u>39178412253</u>	Opened By: Date/Time <u>None</u>	Temp. (°C) Condition <u>None</u>	
Lab Use Only		Custody Seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Work Order # <u>9409276A-</u>	



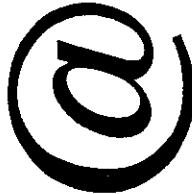
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CHAIN-OFF-CUSTODY RECORD

No. 001858
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Contact Person <u>MICHAEL LUBRECHT</u>		Project Info:		Turn Around Time:				
Company <u>GOLDFER ASSOCIATES</u>	P.O. # <u>933-1280</u>	Project # <u>933-1280</u>	Project Name <u>KITSAP Co.</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush _____ Specify _____			
Address <u>4104 - 148th Ave. NE City REDMOND State WA Zip 98052</u>	Phone <u>(206) 883-0777</u>	FAX <u>(206) 882-5498</u>	Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	Receipt
						Initial	Final	
01A	LOT #52 - SKIRT	9/23/94	11:17a	TO-14	ASTM D-1946 F.G.			2.5" Hg
02A	LOT #51 - SOIL	9/23/94	11:45a	..	ASTM D-1946 F.G.			2.5" Hg
03A	LOT #51 - SKIRT	9/23/94	11:45a	..	ASTM D-1946 F.G.			1.0" Hg
04A	LOT #50 - SOIL	9/23/94	11:52a	..	ASTM D-1946 F.G.			1.0" Hg
05A	LOT #50 - SKIRT	9/23/94	11:52a	..	ASTM D-1946 F.G.			2.0" Hg
06A	LOT #49 - SOIL	9/23/94	11:58a	..	ASTM D-1946 F.G.			2.0" Hg
07A/B	LOT #49 - SKIRT	9/23/94	11:58a	..	ASTM D-1946 F.G.			2.0" Hg
08A	LOT #48 - SOIL	9/23/94	12:16p	..	ASTM D-1946 F.G.			3.0" Hg
09A	LOT #48 - SKIRT	9/23/94	12:16p	..	ASTM D-1946 F.G.			1.5" Hg
10A	LOT #47 - SOIL	9/23/94	12:27p	..	ASTM D-1946 F.G.			1.5" Hg
Collected By: <u>DAVID SLATER</u>		Signature	<u>D. SLATER</u>	Notes: <u>ASTM D-1946 Fixed gases for skirt samples only</u>				2.0" Hg
Relinquished By: <u>D. SLATER</u>		Received By: <u>J. SAWYER</u>	Date/Time: <u>9/26/94 11:50am</u>	Received By: <u>J. SAWYER</u>	Date/Time: <u>27 SEP 94</u>			
Relinquished By: <u>D. SLATER</u>		Received By: <u>J. SAWYER</u>	Date/Time: <u>9/26/94 11:50am</u>	Received By: <u>J. SAWYER</u>	Date/Time: <u>27 SEP 94</u>			
Relinquished By: <u>D. SLATER</u>		Received By: <u>J. SAWYER</u>	Date/Time: <u>9/26/94 11:50am</u>	Received By: <u>J. SAWYER</u>	Date/Time: <u>27 SEP 94</u>			
Shipper Name <u>FED-X</u>	Air Bill # <u>32148912253</u>	Opened By: <u>J. SAWYER</u>	Date/Time: <u>9/26/94 11:50am</u>	Temp. (°C) <u>60.0</u>	Condition <u>Good</u>	Custody Seals Intact? <u>Yes</u>	Work Order # <u>9409277A</u>	
Lab Use Only						No	None	



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CHAIN-OFF-CUSTODY RECORD

No. 001855

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