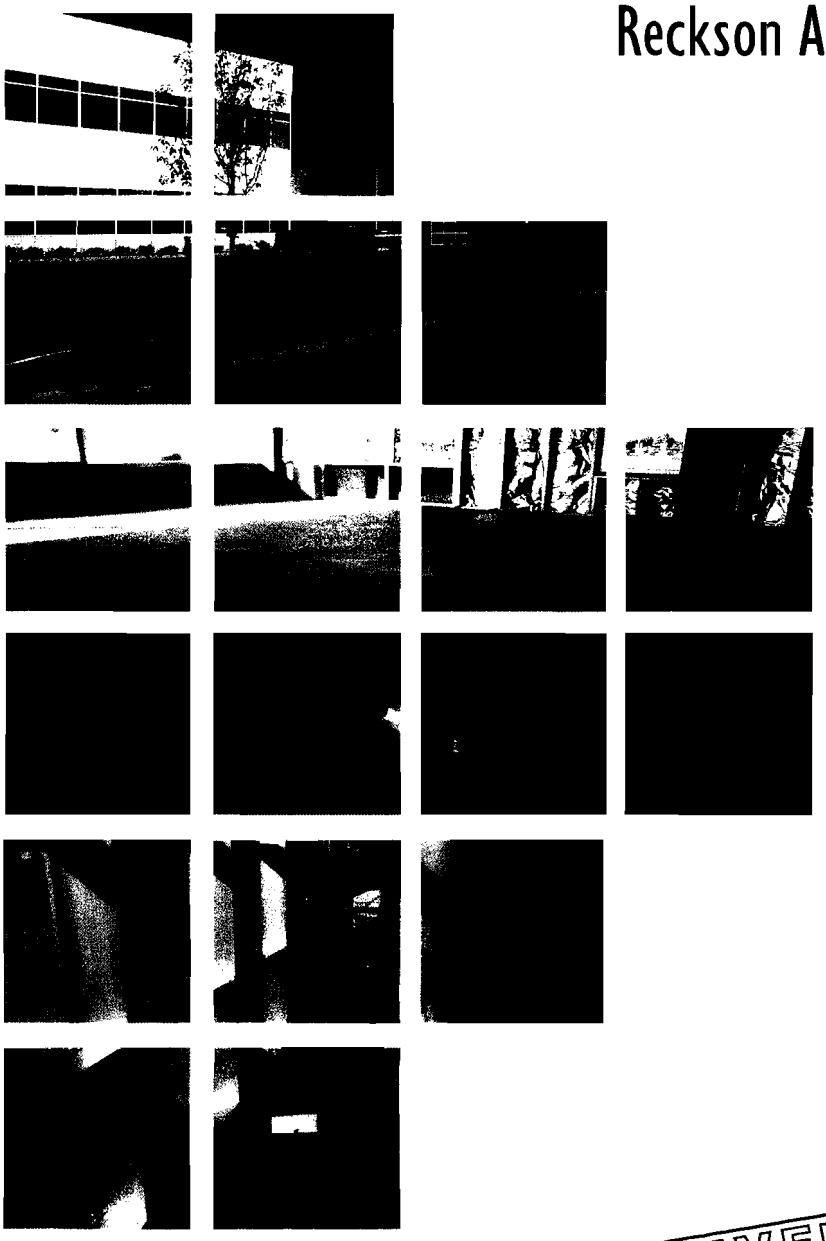
SUB-SLAB SOIL VAPOR INVESTIGATION REPORT



Reckson Associates Realty Corporation

333 Smith Street Site
Farmingdale, Suffolk County
New York

Prepared for:

RECKSON ASSOCIATES REALTY CORPORATION
225 Broadhollow Road
Melville, New York 11747

Prepared by:

Louis Berger & Assoc PC
100 Halsted Street
East Orange, New Jersey 07019

February 2001

SUB-SLAB SOIL VAPOR INVESTIGATION REPORT
333 SMITH STREET, FARMINGDALE, NY

1.0 INTRODUCTION

The following report has been prepared to document the activities conducted at the 333 Smith Street Site in Farmingdale, NY with regard to sampling of the sub-slab vapor. The building is currently undergoing renovations and will be completed as leased office space. On May 19, 2000, The Louis Berger Group, Inc. (Berger) submitted on behalf of owner Reckson Associates (Reckson) a Sub-Slab Soil Vapor Investigation Workplan to the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health (NYSDOH), and the Suffolk County Department of Health Services (SCDHS). This workplan was reviewed by these agencies, amended in accordance with the resulting review comments, resubmitted on July 6, 2000, and approved in a letter from the NYSDEC dated July 14, 2000. This report presents the results of the subject investigation program, and addresses specific comments which were issued by the above aforementioned agencies on November 3, 2000, subsequent to the workplan approval.

2.0 SUB-SLAB VAPOR INVESTIGATION

This sub-slab vapor investigation sampling plan was implemented in full accordance with the approved workplan dated July 6, 2000. Overall, sub-slab vapor sampling locations were selected to accomplish two objectives: first, to measure the vapor concentrations underneath the slab; and, second, to evaluate the potential presence of a secondary source area under the building (the primary source has been remediated). The following subsections present the results of the investigation as they pertain to these two objectives.

2.1 Sub-Slab Vapor Sampling and Analysis

On July 25 and 26, 2000, Berger collected eight (8) soil vapor samples from beneath the concrete slab to measure concentrations of PCE and its degradation products at various locations beneath the building, and one additional sample outside the building to measure ambient air concentrations at the site (see Figure 1 for specific locations). Because the highest concentrations of vapor typically accumulate under the slab in areas furthest away from vapor relief points (i.e., edge of slab), sample locations were biased away from the building edges and the newly constructed atrium in the center of the building (which is open to the outside). In addition, one (1) of the samples (SG-8) was installed as close as practicable to the location of soil boring B-9, as requested by the NYSDOH because it represented the highest previous PCE soil vapor reading (refer to the Remedial Action Workplan, dated January 3, 2000, prepared by Environmental Resource Management).

Sample locations were prepared by initially coring a 1 1/2" diameter hole through the concrete slab, exposing the sub-slab soil. Immediately upon removal of the concrete core, a photoionization detector (PID) was utilized to screen for the presence of volatile organic vapors. PID measurements are summarized on Table 1, although it should be noted that the PID responses observed in SG-5 through SG-8 are believed to be of questionable accuracy due to interference from a significant accumulation of airborne concrete dust observed in the borehole. The readings collected during SG-1 through SG-4 are not similarly questioned because the observed dust accumulation in these boreholes was much less.

Analytical samples were collected utilizing 6-liter Summa canisters, flow-controlled to allow sample collection over a 24-hour period. Figure 2 is a schematic of the sample apparatus set-up that was utilized at each location. Care was used during installation to ensure that an air-tight seal was maintained between the sub-slab vapor and "indoor" air. The vacuum in each canister was recorded prior to and after sample collection and was again recorded in the laboratory to ensure no leakage occurred during collection and during transport to the laboratory. Summa canisters were shipped to Accutest

Laboratories in Dayton, New Jersey (New York Laboratory Certification No. 10983) for analysis via EPA Method TO-14/TO-15 (Volatile Organics).

The analytical results for the analytical samples reflect concentrations of PCE vapors that have accumulated underneath the building slab from the historic contamination. Figure 1 depicts the PCE concentrations at individual sample points. Laboratory summary pages are presented in Appendix A. As these results indicate, the highest concentrations of PCE vapor were somewhat predictably found to exist in closest proximity to the recently removed soils with PCE levels above the New York State TAGM HWR-94-4046 cleanup objectives of (1,400 ug/kg); and more specifically, at sampling points SG-7 and SG-8. It is therefore believed that these most elevated vapor concentrations are therefore the somewhat predictable result of the former contaminated soils which have now been removed, likely due to residual soil gas trapped beneath the slab and/or volatilization from the soils and groundwater underlying the former residual contamination.

2.2 Secondary Source Evaluation

The second objective of this investigation involved utilizing the sub-slab vapor results to determine whether a potential secondary source of PCE contamination exists underneath the building.

As shown on Figure 1 and detailed in Appendix A, the results for the remaining six sub-slab vapor sample locations (SG-1 through SG-6) were reviewed and observed to show concentrations considerably lower than those in SG-7 and SG-8 (it should be noted that due to there being less than the full sample volume in SG-2, the result reported is estimated). It is also noted that the results for these locations exhibit vapor levels similar in magnitude to each other. Based on these findings, it is likely that the PCE detected at these locations is from the residual levels of PCE and the accumulation of vapor beneath the slab over the site history (the more than 10 years since cessation of site operations, and probably considerably longer since the initial spill). Based on these results, there

does not appear to be a secondary, previously undetected source of PCE contamination beneath the building.

3.0 CONCLUSIONS

Based on previous investigations and remediation conducted at the Site, the levels of PCE in the sub-surface soil are found to be below the New York State TAGM standards. The sub-slab soil vapor sampling conducted as part of this investigation revealed PCE concentrations consistent with what would be expected based on the concentration of PCE contaminants present prior to remediation. At this time further investigations or actions to address sub-slab soil contamination are not warranted.

Nonetheless, Reckson understands the concerns of the Department of Health with regard to residual PCE vapors and the potential effect on the indoor air quality upon building completion. For this purpose, Reckson has prepared and implemented an indoor air quality protection plan which has been submitted under separate cover.

TABLES

Table 1

333 Smith Street
Sub-Slab Vapor Investigation

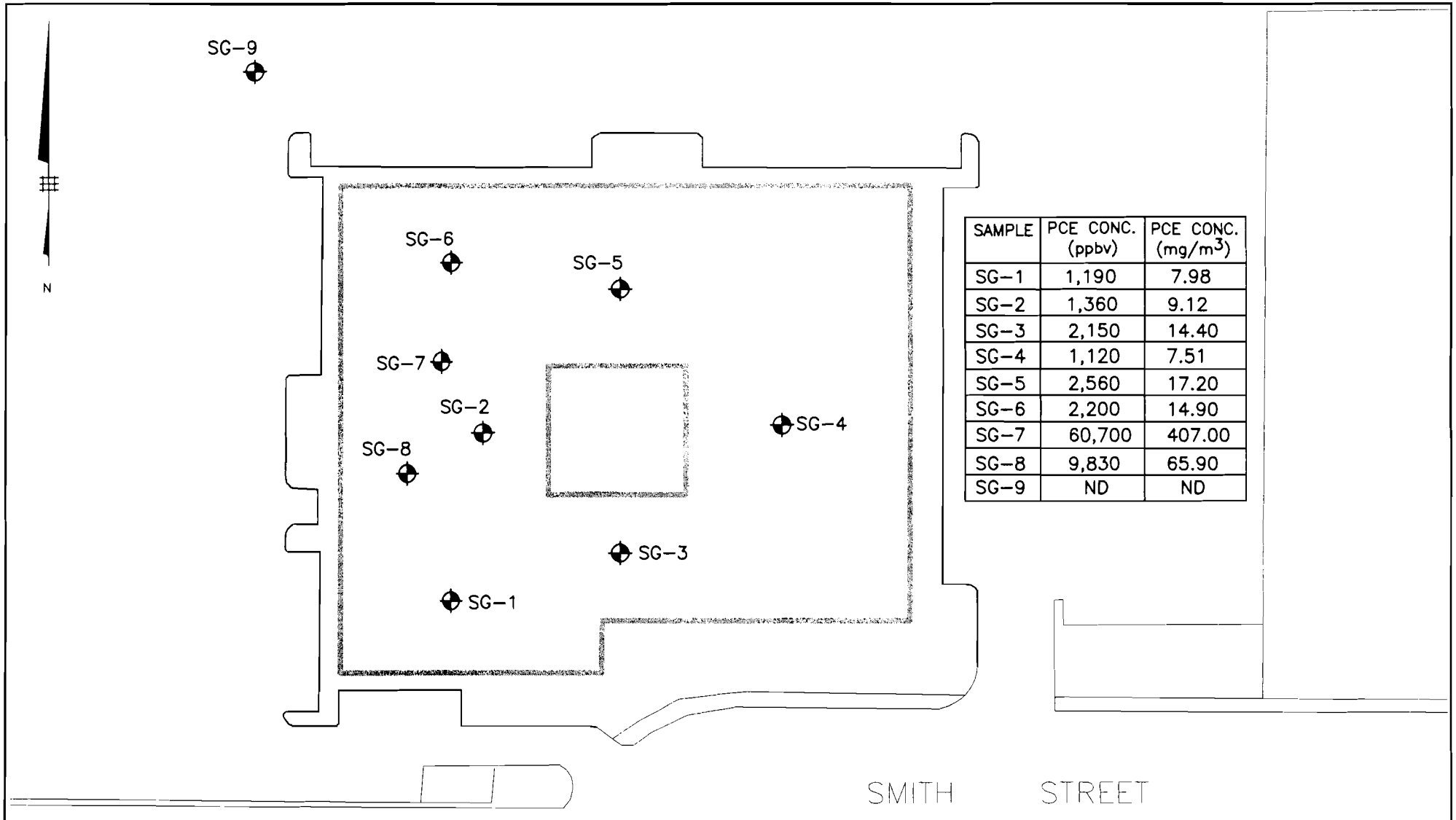
PID & Vacuum Data

Sample Location	Initial PID Reading	Post-Sample PID Reading	Initial Vacuum	Final Vacuum
SG-1	0.3	1.5	29.8	11.8
SG-2	9	32	28.2	24.5
SG-3	500	19.8	>30	13
SG-4	200	6	>30	8.2
SG-5	9999*	7.6	>30	6
SG-6	6000*	39	>30	13
SG-7	9999*	76	28	5.5
SG-8	7000*	35	>30	4.4
SG-9	0	0	28	16.8

Notes:
PID = Photoionization Detector (results in parts per million)
Vacuum Readings in inches of mercury
* - Questionable readings due to concrete dust accumulation in PID

FIGURES

MV-SVSP/23FEB01/SVSP.SCR



SAMPLE	PCE CONC. (ppbv)	PCE CONC. (mg/m^3)
SG-1	1,190	7.98
SG-2	1,360	9.12
SG-3	2,150	14.40
SG-4	1,120	7.51
SG-5	2,560	17.20
SG-6	2,200	14.90
SG-7	60,700	407.00
SG-8	9,830	65.90
SG-9	ND	ND

LEGEND:

EXISTING CURB LINE

PROPOSED CURB LINE

SG SUB-SLAB SOIL GAS LOCATION

0 40 80 160

SCALE IN FEET
1"= 80'

RECKSON ASSOCIATES REALTY CORPORATION

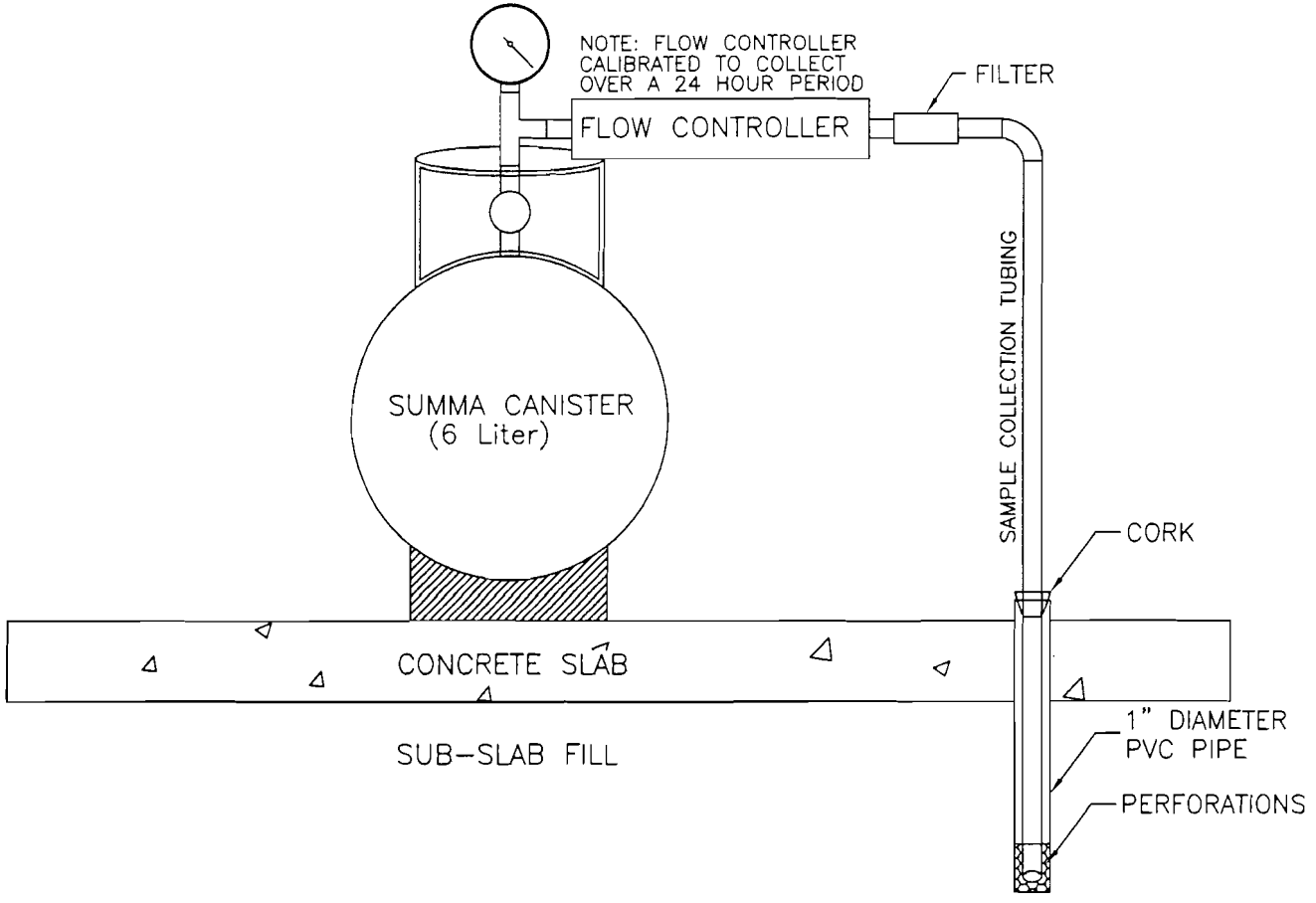
LOUIS BERGER & ASSOC PC
100 HALSTED STREET
EAST ORANGE, NEW JERSEY 07019

333 SMITH STREET

SOIL VAPOR SAMPLING LOCATIONS (PCE CONCENTRATIONS 7/26/00)

SCALE:	DATE:	FIGURE:
1" = 80'	FEB. 2001	1

MV-AIRSAMPLE/27FEB01/U4



RECKSON ASSOCIATES REALTY CORPORATION

THE LOUIS BERGER GROUP, INC.
30 VREELAND ROAD
FLORHAM PARK, NJ 07932

333 SMITH STREET

SOIL VAPOR COLLECTION APPARATUS

SCALE:	DATE:	FIGURE:
N.T.S.	FEB. 2001	2

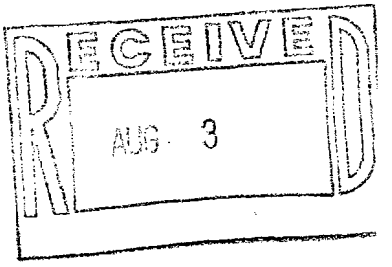
APPENDIX A

Sub-Slab Soil Vapor Analytical Results

ACCUTEST.

08/22/00

Technical Report for



Louis Berger & Assoc.

Reckson Associates, Farmingdale, NY

Accutest Job Number: E73778

Report to:

Louis Berger & Assoc.
100 Halsted Street
East Orange, NJ 07019

ATTN: Tom Tanico

Total number of pages in report: 303

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, KS, MA, MD, NC, PA, RI, SC, VA

Results relate only to the items tested.

ACCUTEST.

Sample Summary

Louis Berger & Assoc.

Job No: E73778

Reckson Associates, Farmingdale, NY

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
E73778-1	07/25/00	16:09	BFJ	07/27/00	AIR	Air	SG-1
E73778-2	07/25/00	16:14	BFJ	07/27/00	AIR	Air	SG-2
E73778-3	07/25/00	16:23	BFJ	07/27/00	AIR	Air	SG-3
E73778-4	07/25/00	16:27	BFJ	07/27/00	AIR	Air	SG-4
E73778-5	07/25/00	16:32	BFJ	07/27/00	AIR	Air	SG-5
E73778-6	07/25/00	16:37	BFJ	07/27/00	AIR	Air	SG-6
E73778-7	07/25/00	16:42	BFJ	07/27/00	AIR	Air	SG-7
E73778-8	07/25/00	16:49	BFJ	07/27/00	AIR	Air	SG-8
E73778-9	07/25/00	16:55	BFJ	07/27/00	AIR	Air	SG-9

ACCUTEST.

Laboratory Deliverables

1. Cover Page, Title Page Listing Certification #, Facility Name and Address, and Date of Report. [–]
2. Table of Contents. [–]
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds. [–]
4. Summary Table cross-referencing field ID #'s vs. lab ID #'s. [–]
5. Document bound, paginated and legible. [–]
6. Chain of Custody. [–]
7. Methodology Summary [–]
8. Laboratory Chronicle and Holding Time Check. [–]
9. Results submitted on a dry weight basis (if applicable) [ ]
10. Method Detection Limits. [–]
11. Lab certified by NJDEPE for parameters or appropriate category of parameters or a member of the USEPA CLP. [–]
12. Non-Conformance Summary. [–]

Millicent Walker
QC Reviewer

8/22/00
Date

ACCUTEST.

Table Of Contents
Reduced Laboratory Data Deliverables
For
Non-USEPA/CLP Methods

Report of Analysis

Client Sample ID:	SG-1		
Lab Sample ID:	E73778-1	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9282.D	1	07/31/00	WG	n/a	n/a	VQ363
Run #2	Q9372.D	10	08/08/00	WG	n/a	n/a	VQ365
Run #3	Q9300.D	160	08/03/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	0.74	0.20	ppbv		2.4	0.64	ug/m3
74-83-9	94	Bromomethane	ND	0.20	ppbv		ND	0.77	ug/m3
108-90-7	112	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64	Chloroethane	ND	0.20	ppbv		ND	0.52	ug/m3
67-66-3	118	Chloroform	2.0	0.20	ppbv		9.6	0.96	ug/m3
74-87-3	50	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	152	Carbon tetrachloride	ND	0.20	ppbv		ND	1.2	ug/m3
75-34-3	98	1,1-Dichloroethane	0.67	0.20	ppbv		2.7	0.80	ug/m3
75-35-4	96	1,1-Dichloroethylene	2.4	0.20	ppbv		9.4	0.78	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
75-71-8	120	Dichlorodifluoromethane	0.70	0.20	ppbv		3.4	0.98	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	5.7	0.20	ppbv		22	0.78	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	146	p-Dichlorobenzene	0.12	0.20	ppbv	J	0.72	1.2	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
100-41-4	106	Ethylbenzene	1.2	0.20	ppbv		5.2	0.87	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	186	Freon 113	6.8	0.20	ppbv	B	52	1.5	ug/m3
76-14-2	170	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
75-09-2	84	Methylene chloride	3.2	0.20	ppbv	B	11	0.69	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	0.81	0.20	ppbv		2.9	0.72	ug/m3
100-42-5	104	Styrene	1.8	0.20	ppbv		7.6	0.85	ug/m3
71-55-6	132	1,1,1-Trichloroethane	62.7 [a]	2.0	ppbv		338 [a]	11	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	0.30	0.20	ppbv		1.5	0.98	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
127-18-4	164	Tetrachloroethylene	1190 [b]	32	ppbv		7980 [b]	210	ug/m3
108-88-3	92	Toluene	8.6	0.20	ppbv		32	0.75	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-1		
Lab Sample ID:	E73778-1	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	130	Trichloroethylene	40.9 [a]	2.0	ppbv		217 [a]	11	ug/m3
75-69-4	136	Trichlorofluoromethane	0.80	0.20	ppbv		4.4	1.1	ug/m3
75-01-4	62	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
	106	m,p-Xylene	3.7	0.20	ppbv		16	0.87	ug/m3
95-47-6	106	o-Xylene	0.96	0.20	ppbv		4.2	0.87	ug/m3
1330-20-7	106	Xylenes (total)	4.6	0.20	ppbv		20	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	89%	70-130%

(a) Result is from Run# 2
(b) Result is from Run# 3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-2		
Lab Sample ID:	E73778-2	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9366.D	8	08/08/00	WG	n/a	n/a	VQ365
Run #2	Q9384.D	80	08/09/00	WG	n/a	n/a	VQ365

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	0.93	1.6	ppbv	J	3.0	5.1	ug/m3
74-83-9	94	Bromomethane	ND	1.6	ppbv		ND	6.2	ug/m3
108-90-7	112	Chlorobenzene	ND	1.6	ppbv		ND	7.3	ug/m3
75-00-3	64	Chloroethane	ND	1.6	ppbv		ND	4.2	ug/m3
67-66-3	118	Chloroform	2.9	1.6	ppbv		14	7.7	ug/m3
74-87-3	50	Chloromethane	ND	1.6	ppbv		ND	3.3	ug/m3
56-23-5	152	Carbon tetrachloride	ND	1.6	ppbv		ND	9.9	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	1.6	ppbv		ND	6.4	ug/m3
75-35-4	96	1,1-Dichloroethylene	ND	1.6	ppbv		ND	6.3	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	1.6	ppbv		ND	12	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	1.6	ppbv		ND	6.4	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	1.6	ppbv		ND	7.3	ug/m3
75-71-8	120	Dichlorodifluoromethane	1.1	1.6	ppbv	J	5.4	7.8	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	3.9	1.6	ppbv		15	6.3	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	1.6	ppbv		ND	7.2	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	1.6	ppbv		ND	9.6	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	1.6	ppbv		ND	9.6	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	1.6	ppbv		ND	9.6	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	1.6	ppbv		ND	7.2	ug/m3
100-41-4	106	Ethylbenzene	1.8	1.6	ppbv		7.8	6.9	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	1.6	ppbv		ND	7.9	ug/m3
76-13-1	186	Freon 113	106	1.6	ppbv		806	12	ug/m3
76-14-2	170	Freon 114	ND	1.6	ppbv		ND	11	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	1.6	ppbv		ND	17	ug/m3
75-09-2	84	Methylene chloride	13.2	1.6	ppbv	B	45.3	5.5	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	ND	1.6	ppbv		ND	5.8	ug/m3
100-42-5	104	Styrene	2.4	1.6	ppbv		10	6.8	ug/m3
71-55-6	132	1,1,1-Trichloroethane	11.5	1.6	ppbv		62.1	8.6	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	1.6	ppbv		ND	11	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	1.6	ppbv		ND	8.6	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	1.6	ppbv		ND	12	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	ND	1.6	ppbv		ND	7.8	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	1.6	ppbv		ND	7.8	ug/m3
127-18-4	164	Tetrachloroethylene	1360 [a]	16	ppbv		9120 [a]	110	ug/m3
108-88-3	92	Toluene	14.5	1.6	ppbv		54.6	6.0	ug/m3
79-01-6	130	Trichloroethylene	32.6	1.6	ppbv		173	8.5	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-2		
Lab Sample ID:	E73778-2	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	ND	1.6	ppbv		ND	8.9	ug/m3
75-01-4	62	Vinyl chloride	ND	1.6	ppbv		ND	4.0	ug/m3
	106	m,p-Xylene	5.7	1.6	ppbv		25	6.9	ug/m3
95-47-6	106	o-Xylene	1.3	1.6	ppbv	J	5.6	6.9	ug/m3
1330-20-7	106	Xylenes (total)	7.0	1.6	ppbv		30	6.9	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%	92%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-3		
Lab Sample ID:	E73778-3	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9283.D	1	07/31/00	WG	n/a	n/a	VQ363
Run #2	Q9373.D	10	08/08/00	WG	n/a	n/a	VQ365
Run #3	Q9302.D	80	08/03/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	1.7	0.20	ppbv		5.4	0.64	ug/m3
74-83-9	94	Bromomethane	ND	0.20	ppbv		ND	0.77	ug/m3
108-90-7	112	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64	Chloroethane	0.24	0.20	ppbv		0.63	0.52	ug/m3
67-66-3	118	Chloroform	2.0	0.20	ppbv		9.6	0.96	ug/m3
74-87-3	50	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	152	Carbon tetrachloride	0.22	0.20	ppbv		1.4	1.2	ug/m3
75-34-3	98	1,1-Dichloroethane	0.50	0.20	ppbv		2.0	0.80	ug/m3
75-35-4	96	1,1-Dichloroethylene	2.6	0.20	ppbv		10	0.78	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
75-71-8	120	Dichlorodifluoromethane	0.87	0.20	ppbv		4.3	0.98	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	8.2	0.20	ppbv		32	0.78	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	146	p-Dichlorobenzene	0.18	0.20	ppbv	J	1.1	1.2	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
100-41-4	106	Ethylbenzene	1.5	0.20	ppbv		6.5	0.87	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	186	Freon 113	3.6	0.20	ppbv	B	27	1.5	ug/m3
76-14-2	170	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
75-09-2	84	Methylene chloride	1.9	0.20	ppbv	B	6.5	0.69	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	3.7	0.20	ppbv		13	0.72	ug/m3
100-42-5	104	Styrene	2.3	0.20	ppbv		9.8	0.85	ug/m3
71-55-6	132	1,1,1-Trichloroethane	43.7 [a]	2.0	ppbv		236 [a]	11	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	0.38	0.20	ppbv		1.9	0.98	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	0.10	0.20	ppbv	J	0.49	0.98	ug/m3
127-18-4	164	Tetrachloroethylene	2150 [b]	16	ppbv		14400 [b]	110	ug/m3
108-88-3	92	Toluene	14.1	0.20	ppbv		53.0	0.75	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-3		
Lab Sample ID:	E73778-3	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	130	Trichloroethylene	114 [a]	2.0	ppbv		606 [a]	11	ug/m3
75-69-4	136	Trichlorofluoromethane	2.4	0.20	ppbv		13	1.1	ug/m3
75-01-4	62	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
	106	m,p-Xylene	4.4	0.20	ppbv		19	0.87	ug/m3
95-47-6	106	o-Xylene	1.0	0.20	ppbv		4.3	0.87	ug/m3
1330-20-7	106	Xylenes (total)	5.5	0.20	ppbv		24	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
460-00-4	4-Bromofluorobenzene	99%	101%	91%	70-130%

(a) Result is from Run# 2
(b) Result is from Run# 3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-4		
Lab Sample ID:	E73778-4	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9284.D	1	07/31/00	WG	n/a	n/a	VQ363
Run #2	Q9304.D	80	08/03/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	0.99	0.20	ppbv		3.2	0.64	ug/m3
74-83-9	94	Bromomethane	ND	0.20	ppbv		ND	0.77	ug/m3
108-90-7	112	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64	Chloroethane	0.14	0.20	ppbv	J	0.37	0.52	ug/m3
67-66-3	118	Chloroform	0.97	0.20	ppbv		4.7	0.96	ug/m3
74-87-3	50	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	152	Carbon tetrachloride	0.19	0.20	ppbv	J	1.2	1.2	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
75-35-4	96	1,1-Dichloroethylene	0.80	0.20	ppbv		3.1	0.78	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
75-71-8	120	Dichlorodifluoromethane	0.88	0.20	ppbv		4.3	0.98	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	0.40	0.20	ppbv		1.6	0.78	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
100-41-4	106	Ethylbenzene	1.8	0.20	ppbv		7.8	0.87	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.23	0.20	ppbv		1.1	0.98	ug/m3
76-13-1	186	Freon 113	3.5	0.20	ppbv	B	27	1.5	ug/m3
76-14-2	170	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
75-09-2	84	Methylene chloride	1.9	0.20	ppbv	B	6.5	0.69	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	0.99	0.20	ppbv		3.6	0.72	ug/m3
100-42-5	104	Styrene	2.7	0.20	ppbv		11	0.85	ug/m3
71-55-6	132	1,1,1-Trichloroethane	22.4	0.20	ppbv		121	1.1	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	0.46	0.20	ppbv		2.2	0.98	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
127-18-4	164	Tetrachloroethylene	1120 [a]	16	ppbv		7510 [a]	110	ug/m3
108-88-3	92	Toluene	13.9	0.20	ppbv		52.3	0.75	ug/m3
79-01-6	130	Trichloroethylene	40.4	0.20	ppbv	E	215	1.1	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-4		
Lab Sample ID:	E73778-4	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	2.2	0.20	ppbv		12	1.1	ug/m3
75-01-4	62	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
	106	m,p-Xylene	5.4	0.20	ppbv		23	0.87	ug/m3
95-47-6	106	o-Xylene	1.4	0.20	ppbv		6.1	0.87	ug/m3
1330-20-7	106	Xylenes (total)	6.7	0.20	ppbv		29	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%	94%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-5		
Lab Sample ID:	E73778-5	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9285.D	1	07/31/00	WG	n/a	n/a	VQ363
Run #2	Q9374.D	10	08/08/00	WG	n/a	n/a	VQ365
Run #3	Q9305.D	80	08/03/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	1.3	0.20	ppbv		4.1	0.64	ug/m3
74-83-9	94	Bromomethane	ND	0.20	ppbv		ND	0.77	ug/m3
108-90-7	112	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64	Chloroethane	0.50	0.20	ppbv		1.3	0.52	ug/m3
67-66-3	118	Chloroform	1.8	0.20	ppbv		8.7	0.96	ug/m3
74-87-3	50	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	152	Carbon tetrachloride	0.21	0.20	ppbv		1.3	1.2	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
75-35-4	96	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.78	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
75-71-8	120	Dichlorodifluoromethane	3.5	0.20	ppbv		17	0.98	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	0.16	0.20	ppbv	J	0.63	0.78	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	146	p-Dichlorobenzene	0.25	0.20	ppbv		1.5	1.2	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
100-41-4	106	Ethylbenzene	1.8	0.20	ppbv		7.8	0.87	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.26	0.20	ppbv		1.3	0.98	ug/m3
76-13-1	186	Freon 113	3.8	0.20	ppbv	B	29	1.5	ug/m3
76-14-2	170	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
75-09-2	84	Methylene chloride	1.6	0.20	ppbv	B	5.5	0.69	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	3.0	0.20	ppbv		11	0.72	ug/m3
100-42-5	104	Styrene	2.9	0.20	ppbv		12	0.85	ug/m3
71-55-6	132	1,1,1-Trichloroethane	13.0	0.20	ppbv		70.2	1.1	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	0.59	0.20	ppbv		2.9	0.98	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	0.17	0.20	ppbv	J	0.83	0.98	ug/m3
127-18-4	164	Tetrachloroethylene	2560 [a]	16	ppbv		17200 [a]	110	ug/m3
108-88-3	92	Toluene	17.8	0.20	ppbv		67.0	0.75	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-5		
Lab Sample ID:	E73778-5	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	130	Trichloroethylene	50.2 [b]	2.0	ppbv		267 [b]	11	ug/m3
75-69-4	136	Trichlorofluoromethane	1.3	0.20	ppbv		7.2	1.1	ug/m3
75-01-4	62	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
	106	m,p-Xylene	5.7	0.20	ppbv		25	0.87	ug/m3
95-47-6	106	o-Xylene	1.5	0.20	ppbv		6.5	0.87	ug/m3
1330-20-7	106	Xylenes (total)	7.2	0.20	ppbv		31	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	91%	70-130%

(a) Result is from Run# 3
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-6		
Lab Sample ID:	E73778-6	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9286.D	1	07/31/00	WG	n/a	n/a	VQ363
Run #2	Q9306.D	80	08/03/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	0.71	0.20	ppbv		2.3	0.64	ug/m3
74-83-9	94	Bromomethane	ND	0.20	ppbv		ND	0.77	ug/m3
108-90-7	112	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64	Chloroethane	ND	0.20	ppbv		ND	0.52	ug/m3
67-66-3	118	Chloroform	1.8	0.20	ppbv		8.7	0.96	ug/m3
74-87-3	50	Chloromethane	0.39	0.20	ppbv		0.80	0.41	ug/m3
56-23-5	152	Carbon tetrachloride	0.24	0.20	ppbv		1.5	1.2	ug/m3
75-34-3	98	1,1-Dichloroethane	0.35	0.20	ppbv		1.4	0.80	ug/m3
75-35-4	96	1,1-Dichloroethylene	2.0	0.20	ppbv		7.8	0.78	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.80	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
75-71-8	120	Dichlorodifluoromethane	1.5	0.20	ppbv		7.4	0.98	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	110 [a]	16	ppbv		432 [a]	63	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.90	ug/m3
100-41-4	106	Ethylbenzene	1.3	0.20	ppbv		5.6	0.87	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.16	0.20	ppbv	J	0.79	0.98	ug/m3
76-13-1	186	Freon 113	3.5	0.20	ppbv	B	27	1.5	ug/m3
76-14-2	170	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
75-09-2	84	Methylene chloride	1.8	0.20	ppbv	B	6.2	0.69	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	0.90	0.20	ppbv		3.2	0.72	ug/m3
100-42-5	104	Styrene	1.9	0.20	ppbv		8.1	0.85	ug/m3
71-55-6	132	1,1,1-Trichloroethane	9.5	0.20	ppbv		51	1.1	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	0.33	0.20	ppbv		1.6	0.98	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
127-18-4	164	Tetrachloroethylene	2220 [a]	16	ppbv		14900 [a]	110	ug/m3
108-88-3	92	Toluene	8.3	0.20	ppbv		31	0.75	ug/m3
79-01-6	130	Trichloroethylene	237 [a]	16	ppbv		1260 [a]	85	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-6		
Lab Sample ID:	E73778-6	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	0.52	0.20	ppbv		2.9	1.1	ug/m3
75-01-4	62	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
	106	m,p-Xylene	3.6	0.20	ppbv		16	0.87	ug/m3
95-47-6	106	o-Xylene	0.91	0.20	ppbv		3.9	0.87	ug/m3
1330-20-7	106	Xylenes (total)	4.5	0.20	ppbv		20	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%	88%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-7		
Lab Sample ID:	E73778-7	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9322.D	80	08/04/00	WG	n/a	n/a	VQ364
Run #2	Q9323.D	1600	08/04/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	ND	16	ppbv		ND	51	ug/m3
74-83-9	94	Bromomethane	ND	16	ppbv		ND	62	ug/m3
108-90-7	112	Chlorobenzene	ND	16	ppbv		ND	73	ug/m3
75-00-3	64	Chloroethane	ND	16	ppbv		ND	42	ug/m3
67-66-3	118	Chloroform	19.2	16	ppbv		92.7	77	ug/m3
74-87-3	50	Chloromethane	ND	16	ppbv		ND	33	ug/m3
56-23-5	152	Carbon tetrachloride	ND	16	ppbv		ND	99	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	16	ppbv		ND	64	ug/m3
75-35-4	96	1,1-Dichloroethylene	ND	16	ppbv		ND	63	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	16	ppbv		ND	120	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	16	ppbv		ND	64	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	16	ppbv		ND	73	ug/m3
75-71-8	120	Dichlorodifluoromethane	ND	16	ppbv		ND	78	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	131	16	ppbv		514	63	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	16	ppbv		ND	72	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	16	ppbv		ND	96	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	16	ppbv		ND	96	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	16	ppbv		ND	96	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	16	ppbv		ND	72	ug/m3
100-41-4	106	Ethylbenzene	ND	16	ppbv		ND	69	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	16	ppbv		ND	79	ug/m3
76-13-1	186	Freon 113	ND	16	ppbv		ND	120	ug/m3
76-14-2	170	Freon 114	ND	16	ppbv		ND	110	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	16	ppbv		ND	170	ug/m3
75-09-2	84	Methylene chloride	ND	16	ppbv		ND	55	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	ND	16	ppbv		ND	58	ug/m3
100-42-5	104	Styrene	ND	16	ppbv		ND	68	ug/m3
71-55-6	132	1,1,1-Trichloroethane	77.8	16	ppbv		420	86	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	16	ppbv		ND	110	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	16	ppbv		ND	86	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	16	ppbv		ND	120	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	ND	16	ppbv		ND	78	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	16	ppbv		ND	78	ug/m3
127-18-4	164	Tetrachloroethylene	60700 [a]	320	ppbv		407000 [a]	2100	ug/m3
108-88-3	92	Toluene	40.8	16	ppbv		154	60	ug/m3
79-01-6	130	Trichloroethylene	1170	16	ppbv		6220	85	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-7		
Lab Sample ID:	E73778-7	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	ND	16	ppbv		ND	89	ug/m3
75-01-4	62	Vinyl chloride	ND	16	ppbv		ND	40	ug/m3
	106	m,p-Xylene	ND	16	ppbv		ND	69	ug/m3
95-47-6	106	o-Xylene	ND	16	ppbv		ND	69	ug/m3
1330-20-7	106	Xylenes (total)	ND	16	ppbv		ND	69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%	87%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-8		
Lab Sample ID:	E73778-8	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9325.D	40	08/04/00	WG	n/a	n/a	VQ364
Run #2	Q9326.D	400	08/04/00	WG	n/a	n/a	VQ364

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	ND	8.0	ppbv		ND	26	ug/m3
74-83-9	94	Bromomethane	ND	8.0	ppbv		ND	31	ug/m3
108-90-7	112	Chlorobenzene	ND	8.0	ppbv		ND	37	ug/m3
75-00-3	64	Chloroethane	ND	8.0	ppbv		ND	21	ug/m3
67-66-3	118	Chloroform	ND	8.0	ppbv		ND	39	ug/m3
74-87-3	50	Chloromethane	ND	8.0	ppbv		ND	16	ug/m3
56-23-5	152	Carbon tetrachloride	ND	8.0	ppbv		ND	50	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
75-35-4	96	1,1-Dichloroethylene	ND	8.0	ppbv		ND	31	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	8.0	ppbv		ND	61	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	8.0	ppbv		ND	37	ug/m3
75-71-8	120	Dichlorodifluoromethane	ND	8.0	ppbv		ND	39	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	32.5	8.0	ppbv		128	31	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3
100-41-4	106	Ethylbenzene	ND	8.0	ppbv		ND	35	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	8.0	ppbv		ND	39	ug/m3
76-13-1	186	Freon 113	22.5	8.0	ppbv	B	171	61	ug/m3
76-14-2	170	Freon 114	ND	8.0	ppbv		ND	56	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	8.0	ppbv		ND	85	ug/m3
75-09-2	84	Methylene chloride	ND	8.0	ppbv		ND	27	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	ND	8.0	ppbv		ND	29	ug/m3
100-42-5	104	Styrene	ND	8.0	ppbv		ND	34	ug/m3
71-55-6	132	1,1,1-Trichloroethane	111	8.0	ppbv		599	43	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	8.0	ppbv		ND	54	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	8.0	ppbv		ND	43	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	8.0	ppbv		ND	59	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	ND	8.0	ppbv		ND	39	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	8.0	ppbv		ND	39	ug/m3
127-18-4	164	Tetrachloroethylene	9830 [a]	80	ppbv		65900 [a]	540	ug/m3
108-88-3	92	Toluene	10.7	8.0	ppbv		40.3	30	ug/m3
79-01-6	130	Trichloroethylene	177	8.0	ppbv		941	42	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-8		
Lab Sample ID:	E73778-8	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	ND	8.0	ppbv		ND	44	ug/m3
75-01-4	62	Vinyl chloride	ND	8.0	ppbv		ND	20	ug/m3
	106	m,p-Xylene	ND	8.0	ppbv		ND	35	ug/m3
95-47-6	106	o-Xylene	ND	8.0	ppbv		ND	35	ug/m3
1330-20-7	106	Xylenes (total)	ND	8.0	ppbv		ND	35	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%	90%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-9		
Lab Sample ID:	E73778-9	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q9332.D	40	08/04/00	WG	n/a	n/a	VQ364
Run #2							

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78	Benzene	ND	8.0	ppbv		ND	26	ug/m3
74-83-9	94	Bromomethane	ND	8.0	ppbv		ND	31	ug/m3
108-90-7	112	Chlorobenzene	ND	8.0	ppbv		ND	37	ug/m3
75-00-3	64	Chloroethane	ND	8.0	ppbv		ND	21	ug/m3
67-66-3	118	Chloroform	ND	8.0	ppbv		ND	39	ug/m3
74-87-3	50	Chloromethane	ND	8.0	ppbv		ND	16	ug/m3
56-23-5	152	Carbon tetrachloride	ND	8.0	ppbv		ND	50	ug/m3
75-34-3	98	1,1-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
75-35-4	96	1,1-Dichloroethylene	ND	8.0	ppbv		ND	31	ug/m3
106-93-4	186	1,2-Dibromoethane	ND	8.0	ppbv		ND	61	ug/m3
107-06-2	98	1,2-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
78-87-5	112	1,2-Dichloropropane	ND	8.0	ppbv		ND	37	ug/m3
75-71-8	120	Dichlorodifluoromethane	ND	8.0	ppbv		ND	39	ug/m3
156-59-2	96	cis-1,2-Dichloroethylene	ND	8.0	ppbv		ND	31	ug/m3
10061-01-5	110	cis-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3
541-73-1	146	m-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
95-50-1	146	o-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
106-46-7	146	p-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
10061-02-6	110	trans-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3
100-41-4	106	Ethylbenzene	8.4	8.0	ppbv		36	35	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	8.0	ppbv		ND	39	ug/m3
76-13-1	186	Freon 113	24.4	8.0	ppbv	B	186	61	ug/m3
76-14-2	170	Freon 114	ND	8.0	ppbv		ND	56	ug/m3
87-68-3	261	Hexachlorobutadiene	ND	8.0	ppbv		ND	85	ug/m3
75-09-2	84	Methylene chloride	9.3	8.0	ppbv	B	32	27	ug/m3
1634-04-4	88	Methyl Tert Butyl Ether	ND	8.0	ppbv		ND	29	ug/m3
100-42-5	104	Styrene	ND	8.0	ppbv		ND	34	ug/m3
71-55-6	132	1,1,1-Trichloroethane	ND	8.0	ppbv		ND	43	ug/m3
79-34-5	166	1,1,2,2-Tetrachloroethane	ND	8.0	ppbv		ND	54	ug/m3
79-00-5	132	1,1,2-Trichloroethane	ND	8.0	ppbv		ND	43	ug/m3
120-82-1	181	1,2,4-Trichlorobenzene	ND	8.0	ppbv		ND	59	ug/m3
95-63-6	120	1,2,4-Trimethylbenzene	6.5	8.0	ppbv	J	32	39	ug/m3
108-67-8	120	1,3,5-Trimethylbenzene	ND	8.0	ppbv		ND	39	ug/m3
127-18-4	164	Tetrachloroethylene	ND	8.0	ppbv		ND	54	ug/m3
108-88-3	92	Toluene	1600	8.0	ppbv		6020	30	ug/m3
79-01-6	130	Trichloroethylene	ND	8.0	ppbv		ND	42	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SG-9		
Lab Sample ID:	E73778-9	**Date Sampled:**	07/25/00
Matrix:	AIR - Air	**Date Received:**	07/27/00
Method:	TO-14/TO-15	**Percent Solids:**	n/a
Project:	Reckson Associates, Farmingdale, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-69-4	136	Trichlorofluoromethane	ND	8.0	ppbv		ND	44	ug/m3
75-01-4	62	Vinyl chloride	ND	8.0	ppbv		ND	20	ug/m3
	106	m,p-Xylene	25.4	8.0	ppbv		110	35	ug/m3
95-47-6	106	o-Xylene	7.9	8.0	ppbv	J	34	35	ug/m3
1330-20-7	106	Xylenes (total)	33.3	8.0	ppbv		144	35	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

CHAIN OF CUSTODY

ACCUTEST
FRESH PONDS CORPORATE VILLAGE, BUILDING B
2235 ROUTE 130, DAYTON, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

ACCUTEST JOB #: E73778
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Louis Berger Group
ADDRESS: 100 Halsted Street
CITY, STATE, ZIP: East Orange NJ 07019
PHONE #: 973-678-1960 x608
SEND REPORT TO: Tom Tanico

FACILITY INFORMATION

PROJECT NAME: Reckson Associates
LOCATION: Farmingdale, NY
PROJECT NO.: JG-1534
FAX #: 973-672-4284

ANALYTICAL INFORMATION

EPA Meth TO-14

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID
& SV - Soil Vapor

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	SUMMA #	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	LAB USE ONLY
-1	SG-1	A095 FC	7.25.00	1609	BFS	SV	1					X	
-2	SG-2	A098 FC		1614		SV	1					X	
-3	SG-3	A169 FC		1623		SV	1					X	
-4	SG-4	A180 FC		1627		SV	1					X	
-5	SG-5	A164 FC		1632		SV	1					X	BS,
-6	SG-6	A094 FC		1637		SV	1					X	
-7	SG-7	A093 FC		1642		SV	1					X	
-8	SG-8	A091 FC		1649		SV	1					X	
-9	SG-9	A134 FC		1655		SV	1					X	

DATA TURNAROUND INFORMATION

- [X] 21 DAYS STANDARD
- [ ] 14 DAYS *RUSH*
- [ ] 7 DAYS *EMERGENCY*
- [ ] OTHER

APPROVED BY:

21 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [X] NJ REDUCED
- [ ] NJ Full
- [ ] FULL CLP
- [X] DISK DELIVERABLE
- [ ] OTHER (SPECIFY)
- [ ] COMMERCIAL "A"
- [ ] COMMERCIAL "B"
- [ ] STATE FORMS

COMMENTS/REMARKS

SG-2 had a high Final Vacuum reading (24.5 "Hg)
Samples collected over a 24 hr time period (7.25.00 to 7.26.00)

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	7/27/00 715	1. 7/27/00 9:30	2.	7/27/00 12:30	2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
3.		3.	4.		4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	SEAL #	PRESERVE WHERE APPLICABLE	ON ICE / TEMPERATURE

ACCUTEST

GC/MS Analysis Case Narrative/Conformance/Non-Conformance Summary

Fraction VT0145TD

	NO	YES
1. Chromatograms Labeled/Compounds Identified *(Field Samples and Method Blanks)*		✓
2. GC/MS Tune Meet Criteria		✓
3. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series.		✓
4. GC/MS Calibration – Initial and Continuing Calibration Meet Method Requirements		✓
5. GC/MS Calibration Requirements		
a. Calibration Check Compounds		✓
b. System Performance Check Compounds		✓
6. Blank Contamination		✓
If yes, the sample result is qualified with a "B".		
7. Surrogate Recoveries Meet Criteria		✓
If the requirement is not met, refer to the Surrogate Summary for comment.		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		N/A
If the requirement is not met, refer to MS/MSD Summary for comment.		
9. Internal Standard Area/Retention Time Shift Meet Criteria		✓
If the requirement is not met, refer to the Internal Standard Summary for comment.		
10. Extraction Holding Time Met		N/A
If the holding time is not met, refer to the Sample Result page for comment.		
11. Analysis Holding Time Met		✓
If the holding time is not met, refer to the Sample Result page for comment.		
12. Volatile Sample Preservation – pH should be < 2. *List any non-compliant samples below:*		

Additional Comments:

QC Review Signature: Benedetta Pagano Date: 8/18/2000

Form: RG04
Rev. Date: 2/9/00