



City of Rochester

FAX (716) 428-6010
TDD/Voice 232-3260

Department of
Environmental Services

Office of the Commissioner
Division of Environmental Quality
30 Church Street, Rm 300B
Rochester, New York 14614-1278
Tel#: (716) 428-6011

May 14, 2001

Todd M. Caffoe, P.E.
Environmental Engineer II - Division Environmental Remediation
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414-9519

RECEIVED

MAY 16 2001

DER/HAZ. WASTE REMED
REGION 8

Re: Quarterly Monitoring Report - Court Street Garage Soil Vapor Extraction System
Rochester, New York

Dear Mr. Caffoe:

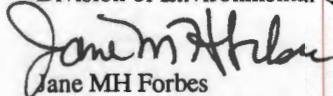
Please find enclosed the soil vapor extraction system (SVES) air monitoring and sampling data recorded during the last sampling event which took place on April 20, 2001. City of Rochester personnel measured SVES vacuum and vapor effluent concentrations for each individual cell (i.e., loop) and the complete SVES.

An effluent air sample was obtained and analyzed for volatile organic compounds (VOCs) via NIOSH method T-014. According to the analytical results, a total of eleven (11) VOCs were detected from the sample. Toluene was detected at the highest concentration (28 ug/m³). Table 2a summarizes the concentrations of each VOC detected, and also presents the calculated annual emission rate, and the calculated maximum annual and maximum short-term impact for each VOC detected. The enclosed graph illustrates the concentration of PCE and total VOCs detected since start-up of the SVES in 1996. As the graph illustrates, the concentration of contaminants detected in the SVES air effluent samples continues to vary.

As illustrated in Table 2a, VOCs have not been detected at a concentrations above the respective Air Guide-1 Short-term Guidance Concentration (SGC) and Annual Guidance Concentration (AGC) since system start-up. The next sampling event will take place in October 2001.

The City awaits your response. If you have any questions or comments regarding this monitoring report, please contact me at 428-7892.

Sincerely,
Division of Environmental Quality


Jane MH Forbes
Environmental Technician

c: Mark Gregor, City of Rochester (w/o enclosures)
Joseph Albert, MCDOH
Dave Napier, NYSDOH

G:\ENVQUAL\JANE\JOBS\COURT_ST\UPDATES.WPD

EEO Employer/Handicapped



TABLE 2a, Court Street Garage Soil Vent System 94 Air Guide-1 Permit Comparisons

Today's Date:										
05/14/2001										
Sample Date:										
04/20/01										
Sampled by:										
City of Rochester - DEQ										
	Effluent Air			Annual	Stack	Max. Act. Annual	Max.Pot.Annual	Max. Short-Term		
Detected	Concentration	Air Flow	Emissions	Emissions	Height	Impact Ca	Impact Cp	Impact Cst	AGC	SGC
Contaminant	mg/m3	cfm	lb/hr	lb/yr	(ft)	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Acetone	0.014	75	3.9329E-06	3.4452E-02	81.78	1.03E-05	1.03E-05	6.67E-04	1.40E+04	1.40E+05
Tetrachloroethene	0.004	75	1.0394E-06	9.1051E-03	81.78	2.72E-06	2.71E-06	1.76E-04	7.50E-02	8.10E+04
Toluene	0.028	75	7.8657E-06	6.8904E-02	81.78	2.06E-05	2.05E-05	1.33E-03	2.00E+03	8.90E+04
m,p-Xylene	0.02	75	5.6184E-06	4.9217E-02	81.78	1.47E-05	1.47E-05	9.53E-04	3.00E+02	1.00E+05
MethylTert-Butyl Ether (MTB)	0.0019	75	5.3375E-07	4.6756E-03	81.78	1.39E-06	1.39E-06	9.06E-05	4.00E+00	- - -
2-Butanone (MEK)	0.0025	75	7.0230E-07	6.1521E-03	81.78	1.84E-06	1.83E-06	1.19E-04	3.00E+02	1.40E+05
Benzene	0.0068	75	1.9102E-06	1.6734E-02	81.78	4.99E-06	4.99E-06	3.24E-04	1.20E-01	3.00E+01
Ethylbenzene	0.0052	75	1.4608E-06	1.2796E-02	81.78	3.82E-06	3.81E-06	2.48E-04	1.00E+03	1.00E+05
Styrene	0.003	75	8.4276E-07	7.3825E-03	81.78	2.20E-06	2.20E-06	1.43E-04	5.10E+02	5.10E+04
Naphthalene	0.0034	75	9.5512E-07	8.3669E-03	81.78	2.50E-06	2.49E-06	1.62E-04	1.20E+02	1.20E+04
o-Xylene	0.0074	75	2.0788E-06	1.8210E-02	81.78	5.43E-06	5.43E-06	3.53E-04	7.00E+02	1.00E+05

City of Rochester

Department of Environmental Quality

Court Street Garage SVE Effluent Contaminant Removal Rates

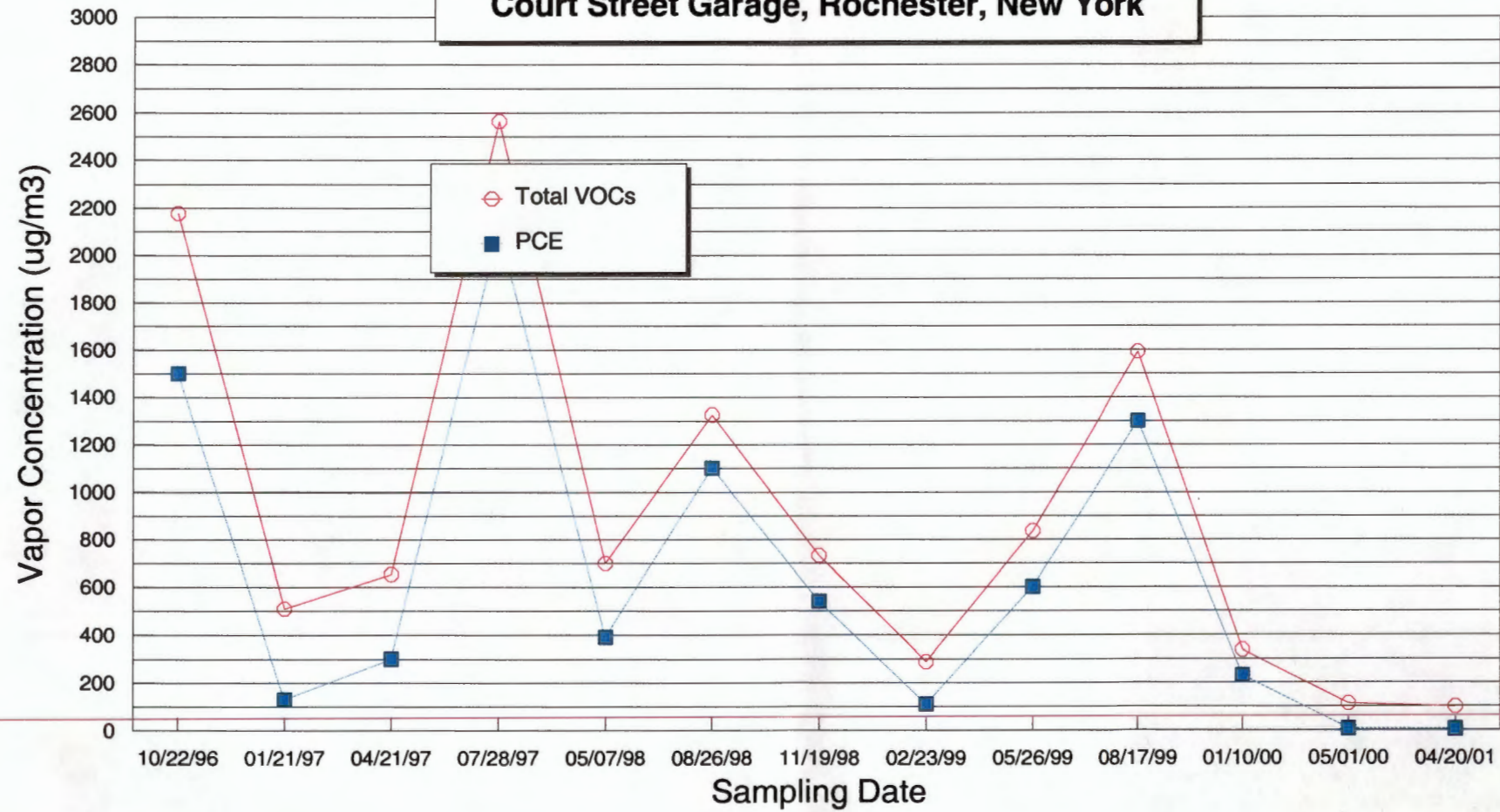
Sample Period

01/01/00 - 05/01/00

Contaminant	Effluent Concentration mg/m3	Specific Gravity	Weight #s/ gallon	Period Emissions Rate(lb/hr)	Contaminant Volume Removed This Period (gals)	Total Contaminants Removed to Date (Gallons)
Chloromethane		0.991	8.253	0.000E+00	0.00000	0.00004
Vinyl Chloride		0.908	7.562	0.000E+00	0.00000	0.00007
Chloroethane		0.903	7.520	0.000E+00	0.00000	0.00013
Bromomethane		1.730	14.407	0.000E+00	0.00000	0.00000
Acetone	0.0140	0.791	6.587	3.367E-06	0.00137	0.01351
Trichlorofluoromethane		1.494	12.442	0.000E+00	0.00000	0.00107
1,1-Dichloroethene		1.250	10.410	0.000E+00	0.00000	0.00000
Methylene Chloride		1.366	11.376	0.000E+00	0.00000	0.00053
Carbon Disulfide		1.263	10.518	0.000E+00	0.00000	0.00525
Trichlorotrifluoroethane		1.560	12.992	0.000E+00	0.00000	0.00030
trans-1,2-Dichloroethene		1.270	10.577	0.000E+00	0.00000	0.00033
cis-1,2-Dichloroethane		1.270	10.577	0.000E+00	0.00000	0.05495
1,1-Dichloroethane		1.176	9.794	0.000E+00	0.00000	0.00000
MTBE	0.0019	0.731	6.088	4.570E-07	0.00020	0.00342
Vinyl Acetate		0.932	7.762	0.000E+00	0.00000	0.00000
2-Butanone	0.0025	0.805	6.704	6.013E-07	0.00024	0.00390
Chloroform		1.490	12.409	0.000E+00	0.00000	0.00633
1,2-Dichloroethane		1.253	10.435	0.000E+00	0.00000	0.00000
1,1,1-Trichloroethane		1.346	11.209	0.000E+00	0.00000	0.00151
Benzene	0.0068	0.879	7.318	1.635E-06	0.00060	0.00162
Carbon Tetrachloride		1.594	13.275	0.000E+00	0.00000	0.04614
1,2-Dichloropropane		1.160	9.660	0.000E+00	0.00000	0.00000
Bromodichloromethane		2.006	16.706	0.000E+00	0.00000	0.00000
Trichloroethene		1.466	12.209	0.000E+00	0.00000	0.01762
cis-1,3-Dichloropropene		1.200	9.994	0.000E+00	0.00000	0.00000
4-Methyl-2-pentanone		0.802	6.677	0.000E+00	0.00000	0.00144
trans-1,3-Dichloropropene		1.200	9.994	0.000E+00	0.00000	0.00000
1,1,2-Trichloroethane		1.441	12.001	0.000E+00	0.00000	0.00000
Toluene	0.0280	0.866	7.212	6.734E-06	0.00251	0.01019
Dibromochloromethane		2.380	19.821	0.000E+00	0.00000	0.00000
2-Hexanone		0.815	6.787	0.000E+00	0.00000	0.00104
1,2-Dibromoethane		2.701	22.494	0.000E+00	0.00000	0.00000
Tetrachloroethene	0.0040	1.631	13.583	9.620E-07	0.00019	0.34976
Chlorobenzene		1.106	9.211	0.000E+00	0.00000	0.00000
Ethylbenzene	0.0052	0.867	7.220	1.251E-06	0.00047	0.00404
Bromoform		2.903	24.176	0.000E+00	0.00000	0.00000
Styrene	0.0030	0.905	7.533	7.215E-07	0.00026	0.00075
m-&p-Xylene	0.0200	0.864	7.195	4.810E-06	0.00180	0.18416
o-Xylene	0.0074	0.880	7.329	1.780E-06	0.00065	0.01909
1,1,2,2-Tetrachloroethane		1.600	13.325	0.000E+00	0.00000	0.00000
1,3-Dichlorobenzene		1.288	10.726	0.000E+00	0.00000	0.00012
1,4-Dichlorobenzene		1.458	12.142	0.000E+00	0.00000	0.00006
1,2-Dichlorobenzene		1.305	10.868	0.000E+00	0.00000	0.00005
Naphthalene	0.0034	1.145	9.536	8.177E-07	0.00023	0.00273

Total (gallons) 0.73015

SVES Effluent Sampling Results Court Street Garage, Rochester, New York



**City of Rochester - DEQ
Court Street Garage
SVE Operation and Maintenance Log**

Date: 4/20/01

Initial Vacuum at blower (" water): 10" H₂O

Initial Vacuum at Moisture Separator (" water): —

Volume of water in Separator (gallons): ~ 15 gallons

Effluent VOC Concentrations(ppm): 10.8 ppm

Moisture Separator Liquid VOC Concentration (ppm): 0.0

Notes: System Running upon arrival

Condition	Vac @ Blower	Vac @ Separator	Vac @ Cell A	Vac @ Cell B	Vac @ Cell C	Vac @ Cell D	Effluent	% Open
Initial	10						10.8	
Cell A Only	14.6						2.1	100
Cell B Only	12.7						4.8	100
Cell C Only	8.2						1.8	100
Cell D Only	15.8						1.4	100
Maximized	14.1						2.8	

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 14608 716-647-2530 FAX 716- 647-3311

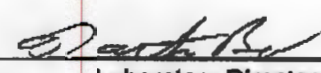
Client: City of Rochester
Client Job Site: Court Street Garage
Rochester, New York
Client Job No.: N/A
Field Location: VES Effluent
Field ID No.: N/A

Lab Project No.: 01-0939
Lab Sample No.: 3781
Sample Type: Summa Canister
Date Sampled: 04/20/2001
Date Received: 04/23/2001

Compound	Result ug/m3	Reporting Limit ug/m3	Result ppb	Reporting Limit ppb
Chloromethane	ND	1.0	ND	0.48
Vinyl Chloride	ND	1.0	ND	0.39
Chloroethane	ND	1.0	ND	0.26
Bromomethane	ND	1.0	ND	0.38
Acetone	14	1.0	6.0	0.42
Trichlorofluoromethane	1.4	1.0	0.25	0.18
1,1-Dichloroethene	ND	1.0	ND	0.25
Methylene Chloride	ND	1.0	ND	0.29
Carbon Disulfide	ND	1.0	ND	0.32
Trichlorotrifluoroethane	ND	1.0	ND	0.13
trans-1,2-Dichloroethene	ND	1.0	ND	0.25
cis-1,2-Dichloroethene	ND	1.0	ND	0.25
1,1-Dichloroethane	ND	1.0	ND	0.25
Methyl tert-Butyl Ether	1.9	1.0	0.53	0.28
Vinyl Acetate	ND	1.0	ND	0.28
2-Butanone	2.5	1.0	0.85	0.34
Chloroform	ND	1.0	ND	0.20
1,2-Dichloroethane	ND	1.0	ND	0.25
1,1,1-Trichloroethane	ND	1.0	ND	0.18
Benzene	6.8	1.0	2.1	0.31
Carbon Tetrachloride	ND	1.0	ND	0.16
1,2-Dichloropropane	ND	1.0	ND	0.22
Bromodichloromethane	ND	1.0	ND	0.15
Trichloroethene	ND	1.0	ND	0.19
cis-1,3-Dichloropropene	ND	1.0	ND	0.22
4-Methyl-2-pentanone	ND	1.0	ND	0.24

ELAP ID No.:11221

Comments: TR = Detected Below Indicated Reporting Limit
ND = Not Detected
Date Analyzed: 4/25/01

Approved By: 
Laboratory Director

File ID: TO14-01-0939

**PARADIGM
Environmental
Services, Inc.**

179 Lake Avenue Rochester, New York 14608 716-647-2530 FAX 716- 647-3311

Client: City of Rochester
Client Job Site: Court Street Garage
Rochester, New York
Client Job No.: N/A
Field Location: VES Effluent
Field ID No.: N/A

Lab Project No.: 01-0939
Lab Sample No.: 3781
Sample Type: Summa Canister
Date Sampled: 04/20/2001
Date Received: 04/23/2001

Compound	Result ug/m3	Reporting Limit ug/m3	Result ppb	Reporting Limit ppb
trans-1,3-Dichloropropene	ND	1.0	ND	0.22
1,1,2-Trichloroethane	ND	1.0	ND	0.18
Toluene	28	1.0	7.5	0.27
Dibromochloromethane	ND	1.0	ND	0.12
2-Hexanone	ND	1.0	ND	0.24
1,2-Dibromoethane	ND	1.0	ND	0.13
Tetrachloroethene	3.7	1.0	0.55	0.15
Chlorobenzene	ND	1.0	ND	0.22
Ethylbenzene	5.2	1.0	1.2	0.23
Bromoform	ND	1.0	ND	0.10
Styrene	3.0	1.0	0.71	0.23
m-&p-Xylenes	20	1.0	4.6	0.23
o-Xylene	7.4	1.0	1.7	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ND	0.15
1,3-Dichlorobenzene	ND	1.0	ND	0.17
1,4-Dichlorobenzene	ND	1.0	ND	0.17
1,2-Dichlorobenzene	ND	1.0	ND	0.17
Naphthalene	3.4	1.0	0.65	0.19

ELAP ID No.:11221

Comments: TR = Detected Below Indicated Reporting Limit
ND = Not Detected
Date Analyzed: 4/25/01

Approved By: [Signature]
for: Laboratory Director

File ID: TO14-01-0939

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 14608 716-647-2530 FAX 716-647-3311

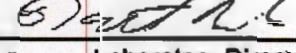
Client: City of Rochester
Client Job Site: Court Street Garage
Rochester, New York
Client Job No.: N/A
Field Location: N/A
Field ID No.: N/A

Lab Project No.: 01-0939
Lab Sample No.: N/A
Sample Type: Method Blank
Date Sampled: N/A
Date Received: N/A

Compound	Result ug/m3	Reporting Limit ug/m3	Result ppb	Reporting Limit ppb
Chloromethane	ND	1.0	ND	0.48
Vinyl Chloride	ND	1.0	ND	0.39
Chloroethane	ND	1.0	ND	0.26
Bromomethane	ND	1.0	ND	0.38
Acetone	ND	1.0	ND	0.42
Trichlorofluoromethane	ND	1.0	ND	0.18
1,1-Dichloroethene	ND	1.0	ND	0.25
Methylene Chloride	ND	1.0	ND	0.29
Carbon Disulfide	ND	1.0	ND	0.32
Trichlorotrifluoroethane	ND	1.0	ND	0.13
trans-1,2-Dichloroethene	ND	1.0	ND	0.25
cis-1,2-Dichloroethene	ND	1.0	ND	0.25
1,1-Dichloroethane	ND	1.0	ND	0.25
Methyl tert-Butyl Ether	ND	1.0	ND	0.28
Vinyl Acetate	ND	1.0	ND	0.28
2-Butanone	ND	1.0	ND	0.34
Chloroform	ND	1.0	ND	0.20
1,2-Dichloroethane	ND	1.0	ND	0.25
1,1,1-Trichloroethane	ND	1.0	ND	0.18
Benzene	ND	1.0	ND	0.31
Carbon Tetrachloride	ND	1.0	ND	0.16
1,2-Dichloropropane	ND	1.0	ND	0.22
Bromodichloromethane	ND	1.0	ND	0.15
Trichloroethene	ND	1.0	ND	0.19
cis-1,3-Dichloropropene	ND	1.0	ND	0.22
4-Methyl-2-pentanone	ND	1.0	ND	0.24

ELAP ID No.:11221

Comments: TR = Detected Below Indicated Reporting Limit
ND = Not Detected
Date Analyzed: 4/25/01

Approved By: 
For: Laboratory Director

File ID: TO14-01-0939Bik

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 14608 716-647-2530 FAX 716- 647-3311

Client: City of Rochester
Client Job Site: Court Street Garage
Rochester, New York
Client Job No.: N/A
Field Location: N/A
Field ID No.: N/A

Lab Project No.: 01-0939
Lab Sample No.: N/A
Sample Type: Method Blank
Date Sampled: N/A
Date Received: N/A

Compound	Result ug/m3	Reporting Limit ug/m3	Result ppb	Reporting Limit ppb
trans-1,3-Dichloropropene	ND	1.0	ND	0.22
1,1,2-Trichloroethane	ND	1.0	ND	0.18
Toluene	ND	1.0	ND	0.27
Dibromochloromethane	ND	1.0	ND	0.12
2-Hexanone	ND	1.0	ND	0.24
1,2-Dibromoethane	ND	1.0	ND	0.13
Tetrachloroethene	ND	1.0	ND	0.15
Chlorobenzene	ND	1.0	ND	0.22
Ethylbenzene	ND	1.0	ND	0.23
Bromoform	ND	1.0	ND	0.10
Styrene	ND	1.0	ND	0.23
m-&p-Xylenes	ND	1.0	ND	0.23
o-Xylene	ND	1.0	ND	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ND	0.15
1,3-Dichlorobenzene	ND	1.0	ND	0.17
1,4-Dichlorobenzene	ND	1.0	ND	0.17
1,2-Dichlorobenzene	ND	1.0	ND	0.17
Naphthalene	ND	1.0	ND	0.19

ELAP ID No.:11221

Comments: TR = Detected Below Indicated Reporting Limit
ND = Not Detected
Date Analyzed: 4/25/01

Approved By: *[Signature]*
Laboratory Director

File ID: TO14-01-0939Bik

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(716) 647-2530 • (800) 724-1997
FAX: (716) 647-3311

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:		LAB PROJECT #:	CLIENT PROJECT #:
COMPANY: <i>City of Rochester</i>	COMPANY:	ADDRESS:		<i>01-0939</i>	
ADDRESS: <i>30 Church St Rm 300B</i>	ADDRESS:	CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
CITY: <i>Rochester NY</i>	STATE: <i>NY</i>	ZIP: <i>14614</i>	CITY:	STATE:	ZIP:
PHONE: <i>428-7892</i>	FAX: <i>428-6010</i>	PHONE:	FAX:	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
PROJECT NAME/SITE NAME: <i>COR - Court St Garage</i>	ATTN: <i>Jane</i>	ATTN:	COMMENTS: <i>PEQ - R0009500B-48</i>		

DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	CONUTMATTERS	REMARKS	PARADIGM LAB SAMPLE NUMBER
<i>4/20/01</i>	<i>200P</i>		<input checked="" type="checkbox"/>	<i>Effluent</i>	<i>Air</i>	<i>1</i>		<i>3781</i>

****LAB USE ONLY****

SAMPLE CONDITION: Check box if acceptable or note deviation: CONTAINER TYPE: PRESERVATIONS: HOLDING TIME: TEMPERATURE: *Room*

Sampled By: <i>Janet Forbes</i>	Date/Time: <i>4/20/01 200P</i>	Relinquished By:	Date/Time:	Total Cost:
Relinquished By: <i>Jim Adair</i>	Date/Time: <i>4/20/01 210P</i>	Received By: <i>C. Bethel</i>	Date/Time: <i>4/20/01 14:10</i>	
Received By:	Date/Time:	Received @ Lab By: <i>Jane J. Palocci</i>	Date/Time: <i>4-23-01 10:10</i>	P.I.F.:

05/11/01 15:27 0718 647 3311 PARADIGM 006/006