Data Quality
no backup data

EPD AP42
28 88 54

COMPLIANCE TESTING FOR SPADRA LANDFILL GAS-TO-ENERGY PLANT

Steam Turbine

July 25 and 26, 1990

Prepared for

Ebasco Constructors, Inc.
3000 West MacArthur Blvd.
Santa Ana, California 92704

SCAQMD Application No. 173026

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Prepared by

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Report PS-90-2315/Project 6908-90

SECTION 1

INTRODUCTION

At the request of Ebasco Constructors, Inc., Pape & Steiner Environmental Services conducted emission tests to determine compliance with the SCAQMD permit limitations (Application Number 173026) issued for Spadra landfill gas-to-energy plant.

The landfill gas-to-energy plant consists of a landfill gas collection system which includes a gas collection blower, a venturi gas scrubber, and an air-cooled gas chiller system. A Zurn Keystone Boiler (110,500,000 Btu/hour) equipped with one Coen 275/DAF-36 low NO_x burner, a flue gas recirculation system and a urea injection system was used to burn the landfill gas. The steam produced in the boiler drives a steam turbine with a maximum output of 11 MW. The power is sold to Southern California Edison.

The boiler is limited to a maximum firing rate of 7000 scfm of landfill gas with an H_2S content of 55 ppm or less. The exhaust gases from the boiler pass through an air preheater and are discharged to the atmosphere via a stack. The stack gas is continuously monitored for NO_x, CO and O_2.

Compliance testing for trace organic and trace inorganic species as well as the normal criteria pollutants were conducted on the landfill gas entering the boiler and the stack gases leaving the boiler.

Section 2 of this report describes the test matrix.

TABLE 3-1. SUMMARY OF SOURCE EMISSION TEST DATA (60°F)

Unit Tested: Ebasco
Spadra Boiler Out

Date: July 25, 1990

	NH_3	HCl
Test Number		
Test Condition	4 MW	4 MW
Barometric Pressure (in. Hg)	29.20	29.02
Stack Pressure (in. Hg)	29.19	29.01
Stack Area (ft^2)	12.57	12.57
Elapsed Sampling Time (min.)	120.0	120.0
Volume Gas Sampled (dscf)	91.252	88.445
F-Factor	8970.91	8970.91
GAS DATA		
Average Gas Velocity (fps)	28.73	28.71
Average Gas Temperature (°F)	301.71	302.83
Gas Flowrate (dscfm)	12,181	12,099
Gas Analysis (Volume %)		
Carbon Dioxide, dry	16.95	17.32
Oxygen, dry	2.94	3.07
Water	15.57	15.45
EMISSION CONCENTRATION		
HCl (ppm)		30.00
NH_3 (ppm)	0.23	
CO (ppm)	0.48	0.60
NO_x (ppm)	16.24	16.13
EMISSION RATE - lb/hr		
HCl		2.09
NH_3	0.01	
CO	0.03	0.03
NO_x	1.44	1.42
EMISSION RATE - lb/MMBtu		
HCl		0.0303
NH_3	0.0001	
CO	0.0004	
NO_x	0.0206	0.0206
EMISSION FACTOR - lb/day		
HCl		50.16
NH_3	0.24	
CO	0.72	0.72
NO_x	34.56	34.08

Avg 89.8 dscf

12,140 dscfm

$\frac{(12140)(2)+(12600)3}{5} = 12,416$

35.46% 25 Stack exhaust

Fig. 0.54 ppm CO, 16.18 ppm NOx

$\frac{2.154+3(4)}{5} = 0.46$ ppm CO

0.0303 → 0.0303, 0.001, 0.0004, 0.0206

TABLE 3-2. SUMMARY OF SOURCE EMISSION TEST DATA (60°F)

Unit Tested: Ebasco
Spadra Boiler Out

Date: July 26, 1990

Test Number		M5.2-1	M6.1-1	M5.2-2	
Test Condition		4 MW	4 MW	5 MW	
Barometric Pressure (in. Hg)		29.27	29.21	29.04	
Stack Pressure (in. Hg)		29.26	29.20	29.02	
Stack Area (ft^2)		12.57	12.57	12.57	
Elapsed Sampling Time (min.)		120.0	120.0	120.0	
Volume Gas Sampled (dscf)		88.409	89.460	100.738	
F-Factor		8970.91	8970.91	8970.91	
GAS DATA					
Average Gas Velocity (fps)		28.24	28.72	32.18	
Average Gas Temperature (°F)		299.63	302.96	301.50	
Gas Flowrate (dscfm)		12,027	12,224	13,547	12,600 dscfm
Gas Analysis (Volume %)					
Carbon Dioxide, dry		16.81	17.26	17.25	
Oxygen, dry		3.00	3.04	3.03	
Water		15.64	15.11	15.72	
EMISSION CONCENTRATION					
Solid Particulate	(gr/dscf)	0.0017		0.0018	
Particulate Matter	(gr/dscf)	0.0018		0.0020	
CO	(ppm)	0.16	0.46	0.58	→ 0.4 ppm CO
SO_2	(ppm)		8.466		
NO_x	(ppm)	15.94	15.90	16.68	~16.18 ppm NOx
$>C_1HC$	(ppm)			<2.43	
EMISSION RATE - lb/hr					
Solid Particulate		0.17		0.21	
Particulate Matter		0.18		0.24	
CO		0.01	0.02	0.03	
SO_2			1.05		
NO_x		1.39	1.41	1.64	
$>C_1HC$				<0.08	
EMISSION RATE - lb/MMBtu					
Solid Particulate		0.0025		0.0027	
Particulate Matter		0.0027		0.0030	
CO		0.0001	0.0004	0.0004	0.0003 for 4
SO_2			0.0150		
NO_x		0.0203	0.0202	0.0212	0.0206 for all 5
$>C_1HC$				<0.0011	
EMISSION FACTOR - lb/day					
Solid Particulate		4.08		5.04	
Particulate Matter		4.32		5.76	
CO		0.24	0.48	0.72	
SO_2			25.20		
NO_x		33.36	33.84	39.36	
$>C_1HC$				<1.92	

TABLE 3-3. SPADRA LANDFILL GAS-TO-ENERGY PLANT MEASURED VERSUS ALLOWABLE EMISSIONS

Measured	Pollutant	Allowable
16.18[a] ppm @ 3% O_2 35.04 lb/day	NO_x	24 ppm @ 3% O_2 92 lb/day
0.46[a] ppm @ 3% O_2 0.58 lb/day	CO	35 ppm @ 3% O_2 81.5 lb/day
25.20[b] lb/day	SO_2	53.3 lb/day
1.92 lb/day	$>C_1$ HC[d]	6.7 lb/day
0.0013[c] gr/dscf @ 12% CO_2 5.04 lb/day	Particulates	0.016 gr/dscf @ 12% CO_2 68 lb/day
20 ppm	H_2S in Landfill Gas	55 ppm

[a] Average of 5 Runs

[b] 1 Run

[c] 2 Runs

[d] Based on SCAQMD Method 25.2

TABLE 3-4. SUMMARY OF SOURCE EMISSION TESTS - PAH/DIOXINS/FURANS/PCB (68°F)

Unit Tested: Spadra Boiler Stack Date: July 25 & 26, 1990

Test Number	1	2
Test Condition	4 MW	4 MW
Barometric Pressure (in. Hg)	29.20	29.27
Stack Pressure (in. Hg)	29.19	29.26
Stack Area (ft^2)	12.57	12.57
Elapsed Sampling Time (min.)	360	360
Volume Gas Sampled (dscf)	177.680	181.833
F-Factor	9108.92	9108.92
GAS DATA		
Average Gas Velocity (fps)	27.79	28.43
Average Gas Temperature (°F)	302.03	302.63
Gas Flowrate (dscfm)	11975	12295
Gas Analysis (Volume %)		
Carbon Dioxide, dry	17.14	17.17
Oxygen, dry	3.00	3.01
Water	15.50	15.30

Avg
302.43

TABLE 3-5. SUMMARY OF SOURCE EMISSION TESTS - PAH

Unit Tested: Spadra Boiler Stack

PPM

Compound	Run 1	Run 2	Average	Blank
Naphthalene	7.46E-05	1.15E-04	9.50E-05	1.11E-04
2-Methyl-Naphthalene	7.38E-06	7.24E-06	7.31E-06	3.77E-06
2-Chloro-Naphthalene	<2.36E-08	<2.89E-08	<2.62E-08	<2.33E-08
Acenaphthene	<1.97E-06	<1.26E-06	<1.62E-06	<1.31E-06
Acenaphthalene	<1.86E-07	<1.54E-07	<1.70E-07	<2.18E-08
Fluorene	1.41E-05	8.05E-06	1.11E-05	8.72E-06
Phenanthrene	6.27E-06	4.28E-06	5.28E-06	2.62E-06
Anthracene	<2.31E-07	<4.99E-08	<1.40E-07	2.13E-06
Fluoranthene	1.04E-06	7.06E-07	8.71E-07	5.90E-07
Pyrene	1.05E-06	9.11E-07	9.79E-07	7.57E-07
Benzo-a-Anthracene	<1.47E-08	<1.02E-08	<1.25E-08	<8.29E-09
Chrysene	1.64E-06	1.22E-06	1.43E-06	1.02E-06
Benzo-b-Fluoranthene	3.21E-07	2.24E-07	2.73E-07	2.19E-07
Benzo-k-Fluoranthene	<1.52E-08	<1.30E-08	<1.41E-08	<7.50E-09
Benzo-e-Pyrene	1.61E-07	1.36E-07	1.49E-07	1.75E-07
Benzo-a-Pyrene	4.99E-08	1.65E-08	3.32E-08	<3.75E-08
Perylene	<3.42E-08	<2.41E-08	<2.91E-08	<1.31E-08
Indeno-123-c,d-Pyrene	9.01E-08	7.45E-08	8.23E-08	5.84E-08
Dibenzo-ah-Anthracene	<6.53E-08	<8.56E-08	<7.55E-08	<3.57E-08
Benzo-ghi-Perylene	2.81E-07	2.54E-07	2.67E-07	1.48E-07

TABLE 3-5. SUMMARY OF SOURCE EMISSION TESTS - PAH (CONTINUED)

Unit Tested: Spadra Boiler Stack

lb/hr

Compound	Run 1	Run 2	Average	Blank
Naphthalene	1.78E-05	2.82E-05	2.30E-05	2.69E-05
2-Methyl-Naphthalene	1.96E-06	1.97E-06	1.97E-06	1.01E-06
2-Chloro-Naphthalene	<7.13E-09	<8.97E-09	<8.05E-09	<7.13E-09
Acenaphthene	<5.66E-07	<3.72E-07	<4.69E-07	<3.81E-07
Acenaphthalene	<5.27E-08	<4.48E-08	<4.88E-08	<6.26E-09
Fluorene	4.37E-06	2.56E-06	3.47E-06	2.74E-06
Phenanthrene	2.08E-06	1.46E-06	1.77E-06	8.82E-07
Anthracene	<7.67E-08	<1.70E-08	<4.69E-08	7.17E-07
Fluoranthene	3.92E-07	2.73E-07	3.33E-07	2.25E-07
Pyrene	3.96E-07	3.53E-07	3.75E-07	2.89E-07
Benzo-a-Anthracene	<6.25E-09	<4.45E-09	<5.35E-09	<3.57E-09
Chrysene	6.98E-07	5.33E-07	6.16E-07	4.40E-07
Benzo-b-Fluoranthene	1.51E-07	1.08E-07	1.30E-07	1.04E-07
Benzo-k-Fluoranthene	<7.15E-09	<6.28E-09	<6.72E-09	<3.57E-09
Benzo-e-Pyrene	7.57E-08	6.56E-08	7.07E-08	8.34E-09
Benzo-a-Pyrene	2.35E-08	7.96E-09	1.57E-08	<1.79E-08
Perylene	<1.61E-08	<1.16E-08	<1.39E-08	<3.81E-07
Indeno-123-c,d-Pyrene	4.64E-08	3.94E-08	4.29E-08	3.05E-08
Dibenzo-ah-Anthracene	<3.39E-08	<4.56E-08	<3.98E-08	<1.88E-08
Benzo-ghi-Perylene	1.45E-07	1.34E-07	1.40E-07	7.72E-08

TABLE 3-5. SUMMARY OF SOURCE EMISSION TESTS - PAH (CONCLUDED)

Unit Tested: Spadra Boiler Stack

LB/MMBtu

Compound	Run 1	Run 2	Average	Blank
Naphthalene	2.64E-07	4.08E-07	3.36E-07	3.93E-07
2-Methyl-Naphthalene	2.90E-08	2.84E-08	2.87E-08	1.48E-08
2-Chloro-Naphthalene	<1.06E-10	<1.29E-10	<1.17E-10	<1.05E-10
Acenaphthene	<8.39E-09	<5.36E-09	<6.88E-09	<5.59E-09
Acenaphthalene	<7.80E-10	<6.46E-20	<7.13E-10	<9.14E-11
Fluorene	6.49E-08	3.70E-08	5.09E-08	4.00E-08
Phenanthrene	3.08E-08	2.11E-08	2.60E-08	1.29E-08
Anthracene	<1.14E-09	<2.45E-10	<6.91E-10	1.05E-08
Fluoranthene	5.79E-09	3.94E-09	4.86E-09	3.29E-09
Pyrene	5.84E-09	5.09E-09	5.46E-09	4.23E-09
Benzo-a-Anthracene	<9.25E-11	<6.46E-11	<7.85E-11	<5.23E-11
Chrysene	1.03E-08	7.66E-09	9.00E-09	6.45E-09
Benzo-b-Fluoranthene	2.23E-09	1.56E-09	1.90E-09	1.52E-09
Benzo-k-Fluoranthene	<1.06E-10	<9.04E-11	<9.81E-11	<5.23E-11
Benzo-e-Pyrene	1.12E-09	9.48E-10	1.04E-09	1.22E-09
Benzo-a-Pyrene	3.47E-10	1.15E-10	2.31E-10	<2.61E-10
Perylene	<2.38E-10	<1.68E-10	<2.03E-10	<9.14E-11
Indeno-123-c,d-Pyrene	6.87E-10	5.68E-10	6.28E-10	4.45E-10
Dibenzo-ah-Anthracene	<5.02E-10	<6.59E-10	<5.80E-10	<2.74E-10
Benzo-ghi-Perylene	2.14E-09	1.94E-09	2.04E-09	1.13E-09

TABLE 3-6. SUMMARY OF SOURCE EMISSION TESTS - DIOXIN/FURAN

Unit Tested: Spadra Boiler Stack

PPM

Compound	Run 1	Run 2	Average	Blank
2378-TCDD	<1.49E-10	<5.83E-10	<3.66E-10	<6.63E-10
12378-PeCDD	<2.68E-10	<6.55E-10	<4.62E-10	<1.19E-10
123478-HxCDD	<2.45E-10	<1.08E-09	<6.61E-10	<1.81E-09
123678-HxCDD	<2.45E-10	<9.57E-10	<6.01E-10	<1.63E-09
123789-HxCDD	<2.45E-10	<1.20E-09	<7.20E-10	<1.81E-09
1234678-HpCDD	<7.88E-10	<1.10E-09	<9.44E-10	<3.34E-09
OCDD	1.36E-08	<1.02E-08	<1.19E-08	1.86E-08
2378-TCDF	1.26E-09	<4.60E-10	<8.58E-10	<6.98E-10
12378-PeCDF	<1.40E-10	<5.49E-10	<3.44E-10	<8.32E-10
23478-PeCDF	<2.81E-10	<6.86E-10	<4.83E-10	<1.04E-09
123478-HxCDF	<2.55E-10	<6.24E-10	<4.39E-10	<1.32E-09
123678-HxCDF	<1.28E-10	<6.24E-10	<3.76E-10	<1.14E-09
234678-HxCDF	3.83E-10	<8.73E-10	<6.28E-10	<1.51E-09
123789-HxCDF	<3.83E-10	<1.12E-09	<7.53E-10	<1.89E-09
1234678-HpCDF	<2.34E-10	<8.00E-10	<5.17E-10	<1.39E-09
1234789-HpCDF	<3.51E-10	<1.14E-09	<7.47E-10	<1.74E-09
OCDF	<7.30E-10	<2.04E-09	<1.38E-09	<6.18E-09

TABLE 3-6. SUMMARY OF SOURCE EMISSION TESTS - DIOXIN/FURAN (CONTINUED)

Unit Tested: Spadra Boiler Stack

LB/HR

Compound	Run 1	Run 2	Average	Blank
2378-TCDD	<8.92E-11	<3.58E-10	<2.24E-10	<4.02E-10
12378-PeCDD	<1.78E-10	<4.48E-10	<3.13E-10	<8.03E-10
123478-HxCDD	<1.79E-10	<8.08E-10	<4.94E-10	<1.34E-09
123678-HxCDD	<1.79E-10	<7.16E-10	<4.48E-10	<1.20E-09
123789-HxCDD	<1.79E-10	<8.98E-10	<5.39E-10	<1.34E-09
1234678-HpCDD	<6.24E-10	<8.95E-10	<7.60E-10	<2.68E-09
OCDD	1.16E-08	<8.96E-09	<1.03E-08	1.61E-08
2378-TCDF	7.16E-10	<2.69E-10	<4.93E-10	<4.02E-10
12378-PeCDF	<8.90E-11	<3.58E-10	<6.24E-10	<5.36E-10
23478-PeCDF	<1.79E-10	<4.48E-10	<3.14E-10	<6.70E-10
123478-HcCDF	<1.78E-10	<4.48E-10	<3.13E-10	<9.35E-10
123678-HxCDF	<8.95E-11	<4.48E-10	<2.69E-10	<8.08E-10
234678-HxCDF	2.68E-10	<6.27E-10	<4.48E-10	<1.07E-09
123789-HxCDF	<2.68E-10	<8.04E-10	<5.36E-10	<1.34E-09
1234678-HpCDF	<1.78E-10	<6.26E-10	<4.02E-10	<1.07E-09
1234789-HpCDF	<2.68E-10	<8.92E-10	<5.80E-10	<1.34E-09
OCDF	<6.25E-10	<1.79E-09	<1.21E-09	<5.36E-09

TABLE 3-6. SUMMARY OF SOURCE EMISSION TESTS - DIOXIN/FURAN (CONCLUDED)

Unit Tested: Spadra Boiler Stack

LB/MMBtu

Compound	Run 1	Run 2	Average	Blank
2378-TCDD	<1.32E-12	<5.17E-12	<3.25E-12	<5.57E-12
12378-PeCDD	<2.64E-12	<6.46E-12	<4.55E-12	<1.11E-11
123478-HxCDD	<2.64E-12	<1.16E-11	<7.14E-12	<1.86E-11
123678-HxCDD	<2.64E-12	<1.03E-11	<6.49E-12	<1.67E-11
123789-HxCDD	<2.64E-12	<1.29E-11	<7.78E-12	<1.86E-11
1234678-HpCDD	<9.25E-12	<1.29E-11	<1.11E-11	<3.71E-11
OCDD	1.72E-10	<1.29E-10	<1.51E-10	2.23E-10
2378-TCDF	1.06E-11	<3.88E-12	<7.22E-12	<5.57E-12
12378-PeCDF	<1.32E-12	<5.17E-12	<3.25E-12	<7.42E-12
23478-PeCDF	<2.64E-12	<6.46E-12	<4.55E-12	<9.28E-12
123478-HxCDF	<2.64E-12	<6.46E-12	<4.55E-12	<1.30E-11
123678-HxCDF	<1.32E-12	<6.46E-12	<3.89E-12	<1.11E-11
234678-HxCDF	3.96E-12	<9.05E-12	<6.51E-12	<1.48E-11
123789-HxCDF	<3.96E-12	<1.16E-11	<7.80E-12	<1.86E-11
1234678-HpCDF	<2.64E-12	<9.05E-12	<5.84E-12	<1.48E-11
1234789-HpCDF	<3.96E-12	<1.29E-11	<8.44E-12	<1.86E-11
OCDF	<9.25E-12	<2.58E-11	<1.75E-11	<7.42E-11

Avg 1.18×10^{-10}

6.27×10^{-12}

4.24×10^{-12}

TABLE 3-7. SUMMARY OF SOURCE EMISSION TESTS - PCB

Unit Tested: Spadra Boiler Stack

PPM

Compound	Run 1	Run 2	Average	Blank
Total Mono PCB	<1.22E-05	<7.46E-08	<6.14E-06	<2.52E-08
Total Di PCB	<2.15E-08	<8.42E-07	<4.32E-07	<2.13E-08
Total Tri PCB	1.49E-07	<3.65E-07	<2.57E-07	1.85E-07
Total Tetra PCB	<4.95E-08	<4.84E-08	<4.89E-08	6.52E-08
Total Penta PCB	<4.43E-08	<7.21E-08	<5.82E-08	1.17E-07
Total Hexa PCB	1.07E-07	<1.31E-07	<1.19E-07	6.60E-07
Total Hepta PCB	<3.66E-08	<5.96E-08	<4.81E-08	1.21E-07
Total Octa PCB	<3.37E-08	<5.49E-08	<4.43E-08	<1.11E-07
Total Nona PCB	1.04E-07	4.06E-97	2.55E-07	2.06E-07
Deca PCB	1.94E-07	<5.68E-07	<3.81E-07	<2.87E-07

LB/HR

Compound	Run 1	Run 2	Average	Blank
Total Mono PCB	<4.28E-06	<2.69E-08	<2.15E-06	<8.95E-09
Total Di PCB	<8.90E-09	<3.58E-07	<1.83E-07	<8.94E-09
Total Tri PCB	7.11E-08	<1.79E-07	<1.25E-07 4.71×10^{-7}	8.95E-08
Total Tetra PCB	<2.68E-08	<2.69E-08	<2.69E-08	3.57E-08
Total Penta PCB	<2.68E-08	<4.47E-08	<3.58E-08	7.16E-08
Total Hexa PCB	7.14E-08	<8.98E-08	<8.06E-08 5.82×10^{-8}	4.47E-07
Total Hepta PCB	<2.68E-08	<4.47E-08	<3.58E-08	8.96E-08
Total Octa PCB	<2.68E-08	<4.48E-08	<3.58E-08	<8.94E-08
Total Nona PCB	8.92E-08	3.58E-07	2.24E-07	1.79E-07
Deca PCB	1.79E-07	<5.37E-07	<3.58E-07 2.24×10^{-7}	<2.68E-07

TABLE 3-7. SUMMARY OF SOURCE EMISSION TESTS - PCB (CONCLUDED)

Unit Tested: Spadra Boiler Stack

LB/MMBtu

Compound	Run 1	Run 2	Average		Blank
Total Mono PCB	<6.34E-08	<3.88E-10	<3.19E-08		<1.31E-10
Total Di PCB	<1.32E-10	<5.17E-09	<2.65E-09		<1.31E-10
Total Tri PCB	1.06E-09	<2.58E-09	<1.82E-09	1.18×10^{-9}	1.31E-09
Total Tetra PCB	<3.96E-10	<3.88E-10	<3.92E-10		5.23E-10
Total Penta PCB	<3.96E-10	<6.46E-10	<5.21E-10		1.05E-09
Total Hexa PCB	1.06E-09	<1.29E-09	<1.17E-09	8.53×10^{-10}	6.53E-09
Total Hepta PCB	<3.96E-10	<6.46E-10	<5.21E-10		1.31E-09
Total Octa PCB	<3.96E-10	<6.46E-10	<5.21E-10		<1.31E-09
Total Nona PCB	1.32E-09	5.17E-09	3.24E-09 ✓		2.61E-09
Deca PCB	2.64E-09	<7.75E-09	<5.20E-09	3.26×10^{-9}	<3.92E-09

8.53×10^{-9}

1.24×10^{-8}

TABLE 3-9. RULE 1150.1 COMPOUNDS IN LANDFILL GAS

Parameter	Results ppb (v/b)	Detection Limit
Vinyl Chloride	3,400	250
Methylene Chloride	16,000	400
1,1-Dichloroethane	2,600	250
1,1-Dichloroethene	3,600	200
Chloroform	ND	200
1,1,1,-Trichloroethane	600	200
Carbon Tetrachloride	ND	200
Benzene	2,700	300
1,2-Dichloroethane	ND	200
Trichloroethene	1,200	250
Toluene	20,000	300
Tetrachloroethene	2,100	300
Chlorobenzene	ND	250
Total Xylenes	7,200	500
Benzyl Chloride	ND	200
1,3-Dichlorobenzene	ND	300
1,4-Dichlorobenzene	ND	400
1,2-Dichlorobenzene	ND	500
Acetonitrile	ND	10,000

TABLE 3-10. RULE 1150.1 COMPOUNDS IN BOILER EXHAUST

Parameter	Results ppb (v/b)	Detection Limit
Vinyl Chloride	ND	5
Methylene Chloride	ND	8
1,1-Dichloroethane	ND	5
1,1-Dichloroethene	ND	4
Chloroform	ND	4
1,1,1,-Trichloroethane	ND	4
Carbon Tetrachloride	ND	4
Benzene	ND	6
1,2-Dichloroethane	ND	4
Trichloroethene	ND	5
Toluene	21	6
Tetrachloroethene	ND	6
Chlorobenzene	ND	5
Total Xylenes	ND	10
Benzyl Chloride	ND	4
1,3-Dichlorobenzene	ND	6
1,4-Dichlorobenzene	ND	8
1,2-Dichlorobenzene	ND	10
Acetonitrile	ND	200