

Laboratory Report

SOUTH COAST ENVIRONMENTAL CO.
1915 MCKINLEY AVENUE, SUITE E
LA VERNE, CA 91750
ATTN: MR. RUSS LOGAN

Analysis No.: G-9109928-002
Date Sampled: 5-APR-1991
Date Sample Rec'd: 9-APR-1991
Sample Type: LIQUID

Project: T1265 PEN
Sample ID: RUN 2 HCL-FILTER #2, FRONT HALF, BACK HALF

Parameter	Units	Sample Result	Sample RL	Blank Result	Blank RL	Date Prepared	Date Analyzed	By
Hydrochloric Acid, as Cl (CARB 421)	ug/sample	24800	1170	ND	25	04/29/91	04/29/91	RJ
otal Impinger Volume (ML)	ml	571	NA	NA	NA	04/26/91	04/26/91	SF

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Analysis No.: G-9109928-003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 9-APR-1991
Sample Type: LIQUID

Project: T1265 PEN
Sample ID: RUN 3 HCL-FILTER #3, FRONT HALF, BACK HALF

Parameter	Units	Sample Result	Sample RL	Blank Result	Blank RL	Date Prepared	Date Analyzed	By
Hydrochloric Acid, as Cl (CARB 421)	ug/sample	25400	1160	ND	25	04/29/91	04/29/91	RJ
Total Impinger Volume (ML)	ml	565	NA	NA	NA	04/26/91	04/26/91	SF

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 ATTN: MR. RUSS LOGAN

Analysis No.: G-9109928-004
 Date Sampled: 3-APR-1991
 Date Sample Rec'd: 9-APR-1991
 Sample Type: LIQUID

Project: T1265 PEN
 Sample ID: FILTER BLANK, Na HCO3 BLANK

Parameter	Units	Sample Result	Sample RL	Blank Result	Blank RL	Date Prepared	Date Analyzed	By
Hydrochloric Acid, as Cl (CARB 421)	ug/sample	376	50	ND	25	04/30/91	04/30/91	RJ
Total Impinger Volume (ML)	ml	489	NA	NA	NA	04/26/91	04/26/91	SF

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 ATTN: MR. RUSS LOGAN
 Project: T1265 PEN
 Sample ID: RUN 1 CL/HCC FUEL #1

Analysis No.: G-9109928-005
 Date Sampled: 5-APR-1991
 Date Sample Rec'd: 9-APR-1991
 Sample Type: LIQUID

Parameter	Units	Sample Result	Sample RL	Blank Result	Blank RL	Date Prepared	Date Analyzed	By
Free Chlorine (EPA 330.4)	mg/L	0.1	0.1	ND	.1	04/23/91	04/23/91	JC
Chlorine, Total Residual EPA 330.4)	mg/L	0.25	0.1	ND	.1	04/20/91	04/20/91	JC
Hydrochloric Acid, as Cl (CARB 421)	ug/sample	455	23	ND	25	04/30/91	04/30/91	RJ
Total Impinger Volume (ML)	ml	223	NA	NA	NA	04/26/91	04/26/91	SF

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 ATTN: MR. KEITH SHANNON

Analysis No.: G-9109928-001/005
 Date Sampled: 3-APR-1991
 5-APR-1991
 Date Sample Rec'd: 9-APR-1991
 Sample Type: LIQUID

Project: T1265 PEn

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration			Amt. Spiked	% Recovery			% RPD
			Sample	MS	MSD		MS	MSD	Avg.	
111412-001A	HYDROCHLORIC ACID, AS CL (CARB 421)	mg	3.1	9.0	9.3	6.0	98	103	100	5
110617-015	HYDROCHLORIC ACID, AS CL (CARB 421)	mg	43.9	78.1	79.4	30.0	114	118	116	3

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

<u>QC Batch</u>	<u>Date</u>	<u>Parameter (Method)</u>	<u>Sample Nos.</u>
9110617-015	30-APR-1991	HYDROCHLORIC ACID, AS CL (CARB 421)	G-9109928-004 G-9109928-005
9111412-001A	29-APR-1991	HYDROCHLORIC ACID, AS CL (CARB 421)	G-9109928-001 G-9109928-002 G-9109928-003

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 ATTN: MR. KEITH SHANNON

Analysis No.: G-9109928-001/005
 Date Sampled: 3-APR-1991
 5-APR-1991
 Date Sample Rec'd: 9-APR-1991
 Sample Type: LIQUID

Project: T1265 PEn

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91119016	HYDROCHLORIC ACID, AS CL (CARB 421)	4.00	mg	95	77-124	0.	18
L91120023	HYDROCHLORIC ACID, AS CL (CARB 421)	4.00	mg	102	77-124	8.	18

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91119016	29-APR-1991	HYDROCHLORIC ACID, AS CL (CARB 421)	G-9109928-001 G-9109928-002 G-9109928-003
L91120023	30-APR-1991	HYDROCHLORIC ACID, AS CL (CARB 421)	G-9109928-004 G-9109928-005



AtmAA Inc.

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070 • FAX (818) 718-9779

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LABORATORY ANALYSIS REPORT

Selected Components Analysis in Tedlar Bag Samples

Report Date : April 9, 1991
P.O. No.: T-1265
Project No.: T-1265
Site : Not Given
Source Test Date: April 3, 1991
Date Received: April 5, 1991
Date Analyzed: April 5, 1991

Vinyl chloride and benzene are analyzed by photoionization detection/gas chromatography.

Dichloromethane is analyzed by electron capture detection/gas chromatography.

Hydrogen sulfide and total sulfur compounds are analyzed by Hall electrolytic conductivity detection/gas chromatography.

<u>AtmAA</u> <u>Lab No.</u>	<u>Sample</u> <u>ID</u>	<u>Benzene</u>	<u>Vinyl</u> <u>Chloride</u>	<u>Dichloromethane</u>
(Concentration in ppb, v/v)				
90951-1	Exhaust #1	36.1	<2	437
90951-2	Exhaust #2	33.7	<2	365
90951-3	Exhaust #3	30.2	<2	410
90951-4	Inlet #1	1700	5270	6180
90951-5	Inlet #2	1700	5340	6010
90951-6	Inlet #3	1620	5420	6200

<u>AtmAA</u> <u>Lab No.</u>	<u>Sample</u> <u>ID</u>	<u>Hydrogen</u> <u>Sulfide</u>	<u>Total Reduced</u> <u>Sulfur</u> <u>Compounds</u>
(Concentration in ppm, v/v)			
90951-4	Inlet #1	46.6	51.4
90951-5	Inlet #2	45.7	50.8
90951-6	Inlet #3	45.4	50.4


Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Duplicates Analyses)

P.O. No.: T-1265
AtmAA Project No.: 3708
Client Project No.: T-1265

Tedlar Bag Samples

Date Received: April 5, 1991
Date Analyzed: April 5, 1991

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Run #1</u>	<u>Analyses Run #2</u>	<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		(Concentration in ppb, v/v)			
Benzene	Exhaust #2	36.2	31.2	33.7	7.4
	Exhaust #3	29.3	32.6	30.2	3.1
	Inlet #2	1710	1680	1700	0.88
Vinyl Chloride	Inlet #2	5370	5320	5340	0.47
Dichloro-methane	Exhaust #3	351	469	410	14
	Inlet #1	6280	6080	6180	1.6
		(Concentration in ppm, v/v)			
Hydrogen sulfide	Inlet #1	45.4	47.8	46.6	2.6
Total reduced sulfur compounds	Inlet #3	50.3	50.6	50.4	0.30

A set of six Tedlar bag samples laboratory number 90951-(1-6) was analyzed for benzene, dichloromethane, vinyl chloride, hydrogen sulfide, and total reduced sulfur compounds. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicate analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 duplicate measurements from the sample set of six Tedlar bags is 3.8%.



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environmental consultants
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SUPPLEMENTAL REPORT****Sulfur Compounds
Analysis in Tedlar Bag Samples**

Report Date : April 22, 1991
P.O. No.: T-1265
Project No.: T-1265
Site : Not Given
Source Test Date: April 3, 1991
Date Received: April 5, 1991
Date Analyzed: April 5, 1991

ANALYSIS DESCRIPTION

Sulfur compounds are analyzed by Hall electrolytic conductivity detection/gas chromatography.

AtmAA Lab No.	Sample ID	(M.W.=34.08) Hydrogen Sulfide	(M.W.=48.11) Methyl Mercaptan	(M.W.=62.13) Dimethyl Sulfide
(Concentration in ppm, v/v)				
90951-4	Inlet #1	46.6	1.22	3.59
90951-5	Inlet #2	45.7	1.30	3.82
90951-6	Inlet #3	45.4	1.28	3.80

Michael L. Porter
Laboratory Director