



Limit Values (TLV) is established by the American Conference of Governmental Industrial Hygienist (ACGIH).

According to OSHA and ACGIH guidelines, employees can be exposed to levels below the PEL and TLV for an 8-hour time period without incurring any long-term adverse health effects. Since there is no PEL or TLV for IAQ pollutants, removal or control of potential pollutants prior to occupancy is a preferred option by industrial hygienists.

#### **4.0 SAMPLING METHODOLOGY**

EPA – TO- 15 test method employs use of pre-evacuated stainless steel flasks with flow controller adjusted to collect ambient air pollutant over the specified time period like 8-hours. Once flow controller indicates that sample collection is complete, SUMA canisters were removed and delivered with a chain of custody to A & B Environmental laboratory, an AIHA Accredited and Laboratory, located at 10100 East Freeway, Suite 100 Houston, Texas 77029.

Two SUMA canisters were set up on September 19 and 20, 2010. One was set up in the Men's Bathroom on 8<sup>th</sup> floor and other was set up in Men's bathroom on the 31<sup>st</sup> until VOCs and SVOCs from the paint application was captured and submitted to an AIHA and NELAC accredited laboratory for gas chromatography – mass spectrometry analysis.

#### **5.0 TEST ANALYSIS AND RESULTS**

Complete laboratory test results with Chain of Custody forms for SUMA canister is attached in Appendix A.

Test results indicated presence of Acetone, 1,1,2 Trichloro-1,2,2 trifluoroethane, 2-Butanone, dichlorodifluoromethane, ethylbenzene, Isopropyl alcohol, O, M and P Xylenes, Toluene, MIBK and Trichloroethylene, ethanol, methylene chloride, and some SVOC compounds listed in the laboratory report in Parts per Billion (PPB), low level.

#### **6.0 RECOMMENDATIONS:**

Following suggestions are for future paint application and/or old paint removal.

1. Use only low VOC solvents or paints during all painting activities.
2. Conduct all new paint application or old paint removal activities over the weekend and/or when no employees are working or present.
3. Install portable charcoal coated HEPA filtration units during the old paint removal and/or new paint applications.





## LIMITATIONS

This report and review are limited in scope. Some information presented in this report was based on data supplied by others. We have no reason to suspect or believe that the information provided is inaccurate. However, E & IH Services cannot be held responsible for information provided by others. Therefore, the data obtained is clear and accurate only to the degree implied by the sources and methods used. Care and skills normally exercised by the members of the Environmental Health, Industrial Hygiene, and Safety Profession, currently practicing under similar conditions in this field were utilized. No other warrant, expressed, or implied, opinions are made nor offered in this report.

Monitored and Prepared By \_\_\_\_\_

Date: \_\_\_\_\_

**SUDHIR DESAI, PH.D**  
**HSE CONSULTANT**  
**CERTIFIED INDUSTRIAL HYGIENIST**  
**CERTIFIED INDOOR AIR QUALITY CONSULTANT**  
**TEXAS STATE DEPARTMENT OF HEALTH SERVICES LICENSED ASBESTOS AND MOLD CONSULTANT**

**E & IH SERVICES**  
**7511 MULRAIN DRIVE**  
**SUGAR LAND, TEXAS 77479**  
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APPENDIX A

LABORATORY TEST RESULTS



# Laboratory Analysis Report

Total Number of Pages: 14

Job ID : 10090807



10100 East Freeway, Suite 100, Houston, TX 77029 Tel: 713-453-6060, Fax: 713-453-6091, <http://www.ablabs.com>

Client Project Name:  
Chase - 5847 St.

Report To: Client Name: E & H Services  
Attn: Dr. Desai  
Client Address: 7511 Mulrain Drive  
City, State, Zip: Sugarland, Texas, 77479

P.O.#:  
Sample Collected By: Dr. Sudhir Desai  
Date Collected: 09/29/10

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
Chase - 09192010-8th-01	Air	10090807.01
Chase - 09192010-31st-02	Air	10090807.02

*Shantail Carpenter*

Released By: Shantail Carpenter  
Title: Senior Project Manager  
Date: 09/29/2010

Analyst: Pragathi Saraiya

*P. Saraiya*



This Laboratory is NELAP (T104704213-10-2) accredited. Effective: 07/01/2010; Expires: 06/30/2011  
Scope: Non-Potable Water, Drinking Water, Air, Solid, Hazardous Waste

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/analyses observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted.



# LABORATORY TERM AND QUALIFIER DEFINITION REPORT



Job ID : 00000007

Date: 9/29/2010

## General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	Reg.Limit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	Rpt.Limit	Reporting Limit
LCS(D)	Laboratory Check Standard Duplicate	SCL	Sample Detection Limit
MS	Matrix Spike	sur	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count

## Qualifier Definition

E4	Concentration Estimated. Analyte exceeded calibration range, but within linear range.
F4	LCSA,CSD RPD exceeds control limit. Recovery meets acceptance criteria.





## LABORATORY TEST RESULTS

Job ID : 10090807

Date: 9/29/2010

Client Name : E & BT Services  
Project Name: Chase - 5847 SL

Attn : Dr. Debat

Client Sample ID: Chase - 09192010-8th-01  
Date Collected: 09/20/10  
Time Collected: 16:45  
Other Information:Lab Sample ID: 10090807.01  
Sample Matrix: Air

Test Method	Parameter/Test Description	M.W.	Results(nf)	RptLimit(nf)	In/Vol(cc)	ug/L	ppm	Q	Date/Time
EPA TO-15	<b>Volatile Organic Compounds in Air by GCMS</b>								
	1,1,1-Trichloroethane	133.4	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,1,2,2-Tetrachloroethane	167.85	BRL	1	1000	< 0.007	< 0.001		09/28/10
	<b>1,1,2-Trichloro-1,2,2-trifluoroethane</b>	<b>187.38</b>	<b>6.1</b>	<b>1</b>	<b>1000</b>	<b>0.047</b>	<b>0.006</b>		<b>09/28/10</b>
	1,1,2-Trichloroethane	133.41	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,1-Dichloroethane	98.96	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,1-Dichloroethylene	96.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,2,4-Trichlorobenzene	181.45	BRL	1	1000	< 0.007	< 0.001		09/28/10
	1,2,4-Trimethylbenzene	120.19	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,2-Dibromoethane	187.87	BRL	1	1000	< 0.008	< 0.001		09/28/10
	1,2-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,2-Dichloroethane	98.96	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,2-Dichloropropane	112.99	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,2-Dichlorotetrafluoroethane	170	BRL	1	1000	< 0.007	< 0.001		09/28/10
	1,3,5-Trimethylbenzene	120.19	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,3-Butadiene	54.09	BRL	1	1000	< 0.002	< 0.001		09/28/10
	1,3-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,4-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,4-Dioxane	88	BRL	1	1000	< 0.004	< 0.001		09/28/10
	<b>2-Butanone</b>	<b>72.11</b>	<b>4.2</b>	<b>1</b>	<b>1000</b>	<b>0.012</b>	<b>0.004</b>		<b>09/28/10</b>
	4-Ethyltoluene	120	BRL	1	1000	< 0.005	< 0.001		09/28/10
	<b>Acetone</b>	<b>58.08</b>	<b>2.73</b>	<b>1</b>	<b>100</b>	<b>0.065</b>	<b>0.027</b>		<b>09/29/10</b>
	Benzene	78.11	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Benzyl chloride	126.59	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Bromodichloromethane	163.83	BRL	1	1000	< 0.007	< 0.001		09/28/10
	Bromoform	252.75	BRL	1	1000	< 0.010	< 0.001		09/28/10
	Bromomethane	94.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Carbon disulfide	76.14	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Carbon tetrachloride	153.82	BRL	1	1000	< 0.006	< 0.001		09/28/10
	Chlorobenzene	112.56	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Chloroethane	65.42	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Chloroform	119.38	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Chloromethane	50.49	BRL	1	1000	< 0.002	< 0.001		09/28/10
	cis-1,2-Dichloroethylene	96.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	cis-1,3-Dichloropropene	110.97	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Cyclohexane	84.16	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Dibromochloromethane	208.29	BRL	1	1000	< 0.009	< 0.001		09/28/10





## LABORATORY TEST RESULTS

Job ID : 10090807

Date: 9/29/2010

Client Name : E & IH Services  
Project Name: Chase - 5847 SL

Attn : Dr. Desai

Client Sample ID: Chase - 09192010-001-01  
Date Collected: 09/20/10  
Time Collected: 15:45  
Other Information:Lab Sample ID: 10090807.01  
Sample Matrix: Air

Test Method	Parameter/Test Description	M.W.	Results(nf)	RptLimit(nf)	InjVol(ul)	ug/L	ppm	Q	Date/Time
EPA TO-15	<b>Volatile Organic Compounds in Air by GCMS</b>								
	Dichlorodifluoromethane	120	1.03	1	1000	0.005	0.001		09/28/10
	Ethanol	46.07	8.46	1	100	0.159	0.085		09/29/10
	Ethyl acetate	88.11	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Ethylbenzene	106.17	4.07	1	1000	0.018	0.004		09/28/10
	Heptane	100.21	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Hexachlorobutadiene	258	BRL	1	1000	< 0.001	< 0.001		09/28/10
	Hexane	86.18	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Isopropyl Alcohol	60.1	2.15	1	100	0.053	0.022		09/29/10
	m- & p-Xylenes	106.17	1.62	1	100	0.070	0.016		09/29/10
	Methyl Butyl Ketone	100	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Methyl Methacrylate	100.12	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Methylene chloride	84.93	6.87	1	1000	0.024	0.007		09/28/10
	MIBK	108.16	2.92	1	1000	0.012	0.003		09/28/10
	MTBE	88.15	BRL	1	1000	< 0.004	< 0.001		09/28/10
	o-Xylene	106.17	4.83	1	1000	0.021	0.005		09/28/10
	Styrene	104	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Tetrachloroethylene	185.83	BRL	1	1000	< 0.007	< 0.001		09/28/10
	Tetrahydrofuran	72.11	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Toluene	92.14	9.3	1	1000	0.035	0.009		09/28/10
	trans-1,3-Dichloropropene	110.97	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Trichloroethylene	131.39	3.21	1	1000	0.017	0.003		09/28/10
	Trichlorofluoromethane	137.37	BRL	1	1000	< 0.006	< 0.001		09/28/10
	Vinyl Acetate	86.09	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Vinyl Chloride	62.5	BRL	1	1000	< 0.003	< 0.001		09/28/10





## LABORATORY TEST RESULTS

Job ID : 10090807

Date: 9/29/2010

Client Name : E & IH Services  
Project Name: Chase - 5847 St.

Attn : Dr. Desai

Client Sample ID: Chase - 09100010-31st-02  
Date Collected: 09/20/10  
Time Collected: 16:52  
Other Information:Lab Sample ID: 10090807.02  
Sample Matrix: Air

Test Method	Parameter/Test Description	PLW	Results(nf)	RptLimit(nf)	InjVol(ul)	ug/L	ppm	Q	Date/Time
EPA TO-15	<b>Volatile Organic Compounds in Air by GCMS</b>								
	1,1,1-Trichloroethane	133.4	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,1,2,2-Tetrachloroethane	167.85	BRL	1	1000	< 0.007	< 0.001		09/28/10
	<b>1,1,2-Trichloro-1,2,2-trifluoroethane</b>	<b>187.38</b>	<b>2.88</b>	<b>1</b>	<b>1000</b>	<b>0.832</b>	<b>0.003</b>		<b>09/28/10</b>
	1,1,2-Trichloroethane	133.41	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,1-Dichloroethane	98.96	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,1-Dichloroethylene	96.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,2,4-Trichlorobenzene	181.45	BRL	1	1000	< 0.007	< 0.001		09/28/10
	1,2,4-Trimethylbenzene	120.19	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,2-Dibromoethane	187.87	BRL	1	1000	< 0.008	< 0.001		09/28/10
	1,3-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,2-Dichloroethane	98.96	BRL	1	1000	< 0.004	< 0.001		09/28/10
	1,2-Dichloropropane	112.99	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,2-Dichloro-1,1,1-trifluoroethane	170	BRL	1	1000	< 0.007	< 0.001		09/28/10
	1,3,5-Trimethylbenzene	120.19	BRL	1	1000	< 0.005	< 0.001		09/28/10
	1,3-Butadiene	54.09	BRL	1	1000	< 0.002	< 0.001		09/28/10
	1,3-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,4-Dichlorobenzene	147.00	BRL	1	1000	< 0.006	< 0.001		09/28/10
	1,4-Dioxane	88	BRL	1	1000	< 0.004	< 0.001		09/28/10
	<b>2-Butanone</b>	<b>72.11</b>	<b>1.35</b>	<b>1</b>	<b>1000</b>	<b>0.004</b>	<b>0.001</b>		<b>09/28/10</b>
	4-Ethyltoluene	120	BRL	1	1000	< 0.005	< 0.001		09/28/10
	<b>Acetone</b>	<b>58.08</b>	<b>17.3</b>	<b>1</b>	<b>1000</b>	<b>0.041</b>	<b>0.017</b>	<b>E4</b>	<b>09/28/10</b>
	Benzene	78.11	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Benzyl chloride	126.59	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Bromodichloromethane	163.83	BRL	1	1000	< 0.007	< 0.001		09/28/10
	Bromoforn	252.75	BRL	1	1000	< 0.009	< 0.001		09/28/10
	Bromomethane	94.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Carbon disulfide	76.14	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Carbon tetrachloride	153.82	BRL	1	1000	< 0.006	< 0.001		09/28/10
	Chlorobenzene	112.56	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Chloroethane	65.42	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Chloroform	119.38	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Chloromethane	50.49	BRL	1	1000	< 0.002	< 0.001		09/28/10
	cis-1,2-Dichloroethylene	96.94	BRL	1	1000	< 0.004	< 0.001		09/28/10
	cis-1,3-Dichloropropene	110.97	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Cyclohexane	84.16	BRL	1	1000	< 0.003	< 0.001		09/28/10
	Dibromochloromethane	208.29	BRL	1	1000	< 0.009	< 0.001		09/28/10





Job ID : 10090807

## LABORATORY TEST RESULTS

Date: 9/29/2010

Client Name : E & H Services  
Project Name: Chase - 5847 St.

Attn : Dr. Decal

Client Sample ID: Chase - 09192010-31st-02  
Date Collected: 09/20/10  
Time Collected: 16:52  
Other Information:Lab Sample ID: 10090807.02  
Sample Matrix: Air

Test Method	Parameter/Test Description	PLWL	Results(nf)	RptLimit(nf)	InjVol(cc)	ug/L	ppm	Q	Date/Time
EPA TO-15	<b>Volatile Organic Compounds in Air by GCMS</b>								
	Dichlorodifluoromethane	120	BRL	1	1000	< 0.005	< 0.001		09/28/10
	<b>Ethanol</b>	<b>46.07</b>	<b>5.64</b>	<b>1</b>	<b>1000</b>	<b>0.011</b>	<b>0.006</b>		<b>09/28/10</b>
	Ethyl acetate	89.11	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Ethylbenzene	106.17	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Heptane	100.71	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Hexachlorobutadiene	258	BRL	1	1000	< 0.011	< 0.001		09/28/10
	Hexane	96.18	BRL	1	1000	< 0.004	< 0.001		09/28/10
	<b>Isopropyl Alcohol</b>	<b>60.1</b>	<b>4.6</b>	<b>1</b>	<b>1000</b>	<b>0.011</b>	<b>0.005</b>		<b>09/28/10</b>
	<b>m- &amp; p-Xylenes</b>	<b>106.17</b>	<b>3.35</b>	<b>1</b>	<b>1000</b>	<b>0.015</b>	<b>0.003</b>		<b>09/28/10</b>
	Methyl Butyl Ketone	100	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Methyl Methacrylate	100.12	BRL	1	1000	< 0.004	< 0.001		09/28/10
	<b>Methylene chloride</b>	<b>84.93</b>	<b>3.39</b>	<b>1</b>	<b>1000</b>	<b>0.012</b>	<b>0.003</b>		<b>09/28/10</b>
	MIBK	100.16	BRL	1	1000	< 0.004	< 0.001		09/28/10
	MTBE	88.15	BRL	1	1000	< 0.004	< 0.001		09/28/10
	<b>o-Xylene</b>	<b>106.17</b>	<b>1.07</b>	<b>1</b>	<b>1000</b>	<b>0.005</b>	<b>0.001</b>		<b>09/28/10</b>
	Styrene	104	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Tetrachloroethylene	165.83	BRL	1	1000	< 0.007	< 0.001		09/28/10
	Tetrahydrofuran	72.11	BRL	1	1000	< 0.003	< 0.001		09/28/10
	<b>Toluene</b>	<b>92.14</b>	<b>3.47</b>	<b>1</b>	<b>1000</b>	<b>0.013</b>	<b>0.003</b>		<b>09/28/10</b>
	trans-1,3-Dichloropropene	110.97	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Trichloroethylene	131.39	BRL	1	1000	< 0.005	< 0.001		09/28/10
	Trichlorofluoromethane	137.37	BRL	1	1000	< 0.006	< 0.001		09/28/10
	Vinyl Acetate	86.09	BRL	1	1000	< 0.004	< 0.001		09/28/10
	Vinyl Chloride	62.5	BRL	1	1000	< 0.003	< 0.001		09/28/10



QUALITY CONTROL CERTIFICATE



Job ID : 10090807

Date : 9/29/2010

Analysis : Volatile Organic Compounds in Air by GCMS

Method : EPA TO-15

Reporting Units : mL

QC Batch ID : Qb10090911 Created Date : 09/29/10

Created By : Pheralya

Samples in This QC Batch : 10090807.01.02

QC Type: Method Blank

Parameter	CAS #	Result	Units	DJF	RptLimit	Qual
2-Butanone	78-93-3	BL	ML	1	1	
4-Ethyltoluene	622-96-8	BL	ML	1	1	
Acetone	67-64-1	BL	ML	1	1	
Benzyl chloride	100-44-7	BL	ML	1	1	
Bromodichloromethane	75-27-4	BL	ML	1	1	
Bromoform	75-25-2	BL	ML	1	1	
Carbon disulfide	75-15-0	BL	ML	1	1	
Cyclohexane	110-82-7	BL	ML	1	1	
Dibromochloromethane	124-48-1	BL	ML	1	1	
Ethanol	64-17-5	BL	ML	1	1	
Ethyl acetate	141-76-6	BL	ML	1	1	
Heptane	142-82-5	BL	ML	1	1	
Hexane	110-54-3	BL	ML	1	1	
Isopropyl Alcohol	67-63-0	BL	ML	1	1	
Methyl Butyl Ketone	561-76-6	BL	ML	1	1	
Methyl Methacrylate	80-62-6	BL	ML	1	1	
MIBK	108-10-1	BL	ML	1	1	
MIBP	1634-04-4	BL	ML	1	1	
Tetrahydrofuran	109-99-9	BL	ML	1	1	
Vinyl Acetate	108-05-4	BL	ML	1	1	

QC Type: LCS and LCSO

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSO Spk Added	LCSO Result	LCSO % Rec	RPD	RPD CntLimit	%Recovery CntLimit	Qual
Dichlorodifluoromethane	5	4.93	98.6	5	4.97	99.4	0.8	30	54.4-141	
Chloromethane	5	5.02	100	5	4.83	96.6	3.9	30	49.1-153	
1,2-Dichlorotetrafluoroetha	5	4.83	96.6	5	4.86	97.2	0.6	30	60.2-142	
Vinyl Chloride	5	4.9	98	5	4.69	93.8	4.4	30	61-139	
Bromomethane	5	5.68	114	5	5.39	106	5.2	30	68-131	
Chloroethane	5	4.85	97	5	4.59	91.8	5.5	30	57.8-144	
Trichlorofluoromethane	5	4.45	89	5	4.84	96.8	8.4	30	52.6-147	
1,1-Dichloroethylene	5	4.65	93	5	4.94	98.8	6	30	72.8-141	
Methylene chloride	5	4.57	91.4	5	4.86	97.2	6.2	30	68.7-141	
1,1,2-Trichloro-1,2,2-trifluo	5	4.26	85.2	5	4.5	90	5.5	30	54.6-149	
1,1-Dichloroethane	5	4.32	86.4	5	4.43	88.6	2.5	30	65.6-154	
cis-1,2-Dichloroethylene	5	4.75	95	5	4.67	93.4	1.7	30	66.3-150	
Chloroform	5	4.66	93.2	5	4.34	86.8	7.1	30	57.1-149	
1,2-Dichloroethane	5	4.37	87.4	5	3.94	78.8	10.3	30	57.4-140	
1,1,1-Trichloroethane	5	4.44	88.8	5	4.28	85.6	2.7	30	55.3-139	





# LABORATORY TEST RESULTS

## TIC\* REPORT

ABB Job Sample ID: 10090807-02

Analysis Date: 28 Sep 2010 6:10 pm

Test Method	Parameter/Test Description	CAS #	RT	MW	Reading(%)**	ppm (w/w)	µg/L	Analyst
TO-15	Isobutane	75-28-5	5.38	58.0	1.28	0.001	0.003	Pisariya
	Pentane	109-66-0	6.70	72.0	2.45	0.002	0.007	Pisariya
	Pentanal	110-62-3	10.25	98.0	2.26	0.002	0.008	Pisariya
	Hexanal	66-25-1	12.69	100.0	12.09	0.012	0.049	Pisariya
	Nonane	111-84-2	15.41	128.0	3.82	0.004	0.019	Pisariya
	Octane, 2,6-dimethyl-	2051-30-1	16.21	142.0	1.21	0.001	0.007	Pisariya
	Nonane, 4-methyl-	17301-94-9	16.78	142.0	1.08	0.001	0.006	Pisariya
	Nonane, 3-methyl-	5911-04-6	16.96	142.0	2.80	0.003	0.016	Pisariya
	Decane	124-18-5	17.51	142.0	9.30	0.009	0.054	Pisariya
	D-Limonene	5989-27-6	18.25	136.0	1.03	0.001	0.006	Pisariya
	Cyclohexane, butyl-	1675-60-9	18.39	140.0	2.82	0.003	0.016	Pisariya
	Nonane, 2,5-dimethyl-	17302-27-1	18.66	156.0	1.00	0.001	0.006	Pisariya
	Decane, 3-methyl-	13151-34-3	18.83	156.0	1.02	0.001	0.007	Pisariya
	Undecane	1120-21-4	19.45	156.0	7.02	0.007	0.045	Pisariya
	Dodecane	112-40-3	21.25	170.0	2.49	0.002	0.017	Pisariya

\* TIC: Tentatively identified compounds.

\*\*The values are estimated relative to the nearest internal standards and only major peaks are reported.





# LABORATORY TEST RESULTS

## TIC REPORT

ASB Job Sample ID: Method Blank

Analysis Date: 28 Sep 2010 4:52 pm

Test Method	Parameter/Test Description	CAS #	RT	MW	Heading(s)	ppm (w/w)	µg/L	Analyst
IC-15	None							Paralya

\* TIC: Tentatively identified compounds.

\*\*The values are estimated relative to the nearest internal standards and only major peaks are reported.



QUALITY CONTROL CERTIFICATE



Job ID : 10090807

Date : 9/29/2010

Analysis : Volatile Organic Compounds in Air by GCMS

Method : EPA TO-15

Reporting Units : nl

QC Batch ID : Qc10092911 Created Date : 09/29/10

Created By : Parvya

Samples in This QC Batch : 10090807.D1,D2

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit	Qual
Dichlorodifluoromethane	75-71-8	NDL	nl	1	1	
Chloromethane	74-87-3	NDL	nl	1	1	
1,2-Dichlorotetrafluoroethane	76-14-2	NDL	nl	1	1	
Vinyl Chloride	75-01-4	NDL	nl	1	1	
Bromomethane	74-83-9	NDL	nl	1	1	
Chloroethane	75-00-3	NDL	nl	1	1	
Trichlorofluoromethane	75-69-4	NDL	nl	1	1	
1,1-Dichloroethylene	75-35-4	NDL	nl	1	1	
Methylene chloride	75-09-2	NDL	nl	1	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NDL	nl	1	1	
1,1-Dichloroethane	75-34-3	NDL	nl	1	1	
cis-1,2-Dichloroethylene	156-59-2	NDL	nl	1	1	
Chloroform	67-66-3	NDL	nl	1	1	
1,2-Dichloroethane	107-06-2	NDL	nl	1	1	
1,1,1-Trichloroethane	71-55-6	NDL	nl	1	1	
Benzene	71-43-2	NDL	nl	1	1	
Carbon tetrachloride	56-23-5	NDL	nl	1	1	
1,2-Dichloropropane	78-67-5	NDL	nl	1	1	
Trichloroethylene	79-01-6	NDL	nl	1	1	
cis-1,3-Dichloropropene	10061-01-5	NDL	nl	1	1	
trans-1,3-Dichloropropene	10061-02-6	NDL	nl	1	1	
1,1,2-Trichloroethane	79-00-5	NDL	nl	1	1	
Toluene	108-88-3	NDL	nl	1	1	
1,2-Dibromoethane	106-93-4	NDL	nl	1	1	
Tetrachloroethylene	127-18-4	NDL	nl	1	1	
Chlorobenzene	108-90-7	NDL	nl	1	1	
Ethylbenzene	100-41-4	NDL	nl	1	1	
m- & p-Xylenes	106-38-3,106-42-3	NDL	nl	1	1	
Styrene	100-42-5	NDL	nl	1	1	
o-Xylene	95-47-6	NDL	nl	1	1	
1,1,2,2-Tetrachloroethane	79-34-5	NDL	nl	1	1	
1,3,5-Trimethylbenzene	108-67-8	NDL	nl	1	1	
1,2,4-Trimethylbenzene	95-63-6	NDL	nl	1	1	
1,3-Dichlorobenzene	541-73-1	NDL	nl	1	1	
1,4-Dichlorobenzene	106-46-7	NDL	nl	1	1	
1,2-Dichlorobenzene	95-50-1	NDL	nl	1	1	
1,2,4-Trichlorobenzene	120-82-1	NDL	nl	1	1	
Hexachlorobutadiene	87-68-3	NDL	nl	1	1	
1,3-Butadiene	106-99-0	NDL	nl	1	1	
1,4-Dioxane	123-91-1	NDL	nl	1	1	



QUALITY CONTROL CERTIFICATE



Job ID : 10090807

Date : 9/29/2008

Analysis : Volatile Organic Compounds in Air by GCMS

Method : EPA TO-15

Reporting Units : nL

QC Batch ID : Qc10092911 Created Date : 09/29/08

Created By : Purnima

Samples in This QC Batch : 10090807.01.02

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit	Qual
2-Butanone	78-93-3	BRL	nL	1	1	
4-Ethyltoluene	622-96-8	BRL	nL	1	1	
Acetone	67-64-1	BRL	nL	1	1	
Benzyl chloride	300-44-7	BRL	nL	1	1	
Bromodichloromethane	75-27-4	BRL	nL	1	1	
Bromoform	75-25-2	BRL	nL	1	1	
Carbon disulfide	75-15-0	BRL	nL	1	1	
Cyclohexane	110-82-7	BRL	nL	1	1	
Dibromodichloromethane	124-48-1	BRL	nL	1	1	
Ethanol	64-17-5	BRL	nL	1	1	
Ethyl acetate	142-78-6	BRL	nL	1	1	
Heptane	142-82-5	BRL	nL	1	1	
Hexane	110-54-3	BRL	nL	1	1	
Isopropyl Alcohol	67-63-0	BRL	nL	1	1	
Methyl Butyl Ketone	561-78-6	BRL	nL	1	1	
Methyl Methacrylate	80-62-6	BRL	nL	1	1	
MIBK	108-10-1	BRL	nL	1	1	
MIBL	1634-04-4	BRL	nL	1	1	
Tetrahydrofuran	309-99-9	BRL	nL	1	1	
Vinyl Acetate	308-05-4	BRL	nL	1	1	

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec.	LCSD Spk Added	LCSD Result	LCSD % Rec.	RPD	RPD Crft.Limit	%Recovery Crft.Limit	Qual
Dichlorodifluoromethane	5	4.93	98.6	5	4.97	99.4	0.8	30	94.4-141	
Chloromethane	5	5.02	100	5	4.83	96.6	3.9	30	49.1-153	
1,2-Dichlorotetrafluoroetha	5	4.83	96.6	5	4.86	97.2	0.6	30	60.2-142	
Vinyl Chloride	5	4.9	98	5	4.69	93.8	4.4	30	61-129	
Bromomethane	5	5.68	114	5	5.39	108	5.2	30	68-131	
Chloroethane	5	4.85	97	5	4.59	92.8	5.5	30	57.8-144	
Trichlorofluoromethane	5	4.45	89	5	4.84	96.8	8.4	30	52.6-147	
1,1-Dichloroethylene	5	4.65	93	5	4.94	98.8	6	30	72.8-141	84
Methylene chloride	5	4.57	91.4	5	4.86	97.2	6.2	30	68.7-141	
1,1,2-Trichloro-1,2,2-trifluo	5	4.26	85.2	5	4.5	90	5.5	30	94.6-148	
1,1-Dichloroethane	5	4.32	86.4	5	4.43	85.6	2.5	30	65.6-154	
cis-1,2-Dichloroethylene	5	4.75	95	5	4.67	93.4	1.7	30	66.3-150	
Chloroform	5	4.66	93.2	5	4.34	86.8	7.1	30	57.3-145	
1,2-Dichloroethane	5	4.37	87.4	5	3.94	78.8	10.3	30	57.4-140	
1,1,1-Trichloroethane	5	4.44	88.8	5	4.28	85.6	3.7	30	55.3-139	



QUALITY CONTROL CERTIFICATE



Job ID : 10090807

Date : 9/29/2010

Analysis : Volatile Organic Compounds in Air by GCMS

Method : EPA TO-15

Reporting Units : nL

QC Batch ID : Q010002911 Created Date : 09/29/10

Created By : Pshriya

Samples in This QC Batch : 10090807.01,02

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD Cr/Limit	%Recovery Cr/Limit	Qual
Benzene	5	4.56	91.2	5	4.24	84.8	7.3	30	57.3-141	
Carbon tetrachloride	5	4.31	86.2	5	4.27	85.4	0.9	30	58.8-135	
1,2-Dichloropropane	5	4.44	88.8	5	3.69	73.8	18.5	30	53.4-145	
Trichloroethylene	5	4.69	93.8	5	4.29	85.8	8.9	30	52.8-133	
cis-1,3-Dichloropropene	5	4.88	97.6	5	3.96	79.2	20.8	30	54.6-142	
trans-1,3-Dichloropropene	5	4.87	97.4	5	3.75	75	26	30	52.3-139	
1,1,2-Trichloroethane	5	4.91	98.2	5	3.81	76.2	25.2	30	56.8-139	
Toluene	5	4.79	95.8	5	3.82	76.4	22.5	30	64.7-137	
1,2-Dibromoethane	5	4.92	98.4	5	3.74	74.8	27.3	30	57.3-133	
Tetrachloroethylene	5	4.99	99.8	5	4.26	85.2	15.8	30	52-133	
Chlorobenzene	5	4.94	98.8	5	3.7	74	28.7	30	73.7-121	
Ethylbenzene	5	4.98	99.6	5	3.61	72.2	31.9	30	71.4-133	NA
m- & p-Xylenes	10	10.1	101	10	7.36	73.6	31.4	30	67.5-137	NA
Styrene	5	6.07	121	5	3.96	79.2	42.1	30	69.3-125	NA
o-Xylene	5	5.11	102	5	3.65	71	35.3	30	61.1-138	NA
1,1,2,2-Tetrachloroethane	5	5.76	115	5	3.89	77.8	38.8	30	59.7-132	NA
1,3,5-Trimethylbenzene	5	5.47	109	5	3.75	75	37.3	30	52.3-135	NA
1,2,4-Trimethylbenzene	5	5.72	114	5	3.79	75.8	40.6	30	51.8-132	NA
1,3-Dichlorobenzene	5	5.59	112	5	3.69	73.8	40.9	30	53.6-134	NA
1,4-Dichlorobenzene	5	6.02	120	5	3.84	76.8	44.2	30	51.1-136	NA
1,2-Dichlorobenzene	5	5.56	119	5	3.95	79	40.6	30	46.1-137	NA
1,2,4-Trichlorobenzene	5	5.41	108	5	3.61	72.2	39.9	30	49.9-136	NA
Hexachlorobutadiene	5	6.17	123	5	3.99	79.8	42.9	30	49.1-136	NA
1,3-Butadiene	5	4.85	99	5	4.7	94	5.2	30	60-140	
Ethanol	5	4.5	90	5	3.31	66.2	30.5	30	60-140	NA
Acetone	5	3.86	77.2	5	3.38	67.6	13.2	30	60-140	
Isopropyl Alcohol	5	6.05	121	5	4.84	96.8	22.2	30	60-140	
Carbon disulfide	5	4.87	97.4	5	5.06	101	3.8	30	60-140	
MTBE	5	4.17	83.4	5	3.58	71.6	15.2	30	60-140	
2-Butanone	5	5.29	106	5	3.64	76.8	31.8	30	60-140	NA
Ethyl acetate	5	5.50	110	5	3.94	78.8	33.1	30	60-140	NA
Hexane	5	4.44	88.8	5	4.28	85.6	3.7	30	60-140	
Tetrahydrofuran	5	4.48	89.6	5	3.46	69.2	25.7	30	60-140	
Cyclohexane	5	4.26	85.2	5	4.11	82.2	3.6	30	60-140	
1,4-Dioxane	5	5.38	108	5	3.92	78.4	31.4	30	60-140	NA
Methyl Methacrylate	5	3.9	78	5	2.1	42	60	30	60-140	NA
Heptane	5	4.54	90.8	5	3.85	77	16.4	30	60-140	
MIBK	5	6.08	122	5	4.37	87.4	32.7	30	60-140	NA
Methyl Butyl Ketone	5	5.32	106	5	4.74	94.8	11.5	30	60-140	
Bromoform	5	5.46	109	5	4.07	81.4	29.2	30	60-140	
4-Ethyltoluene	5	5.68	114	5	3.83	76.6	38.9	30	60-140	NA
Benzyl chloride	5	5.85	117	5	4.16	83.2	33.8	30	60-140	NA



QUALITY CONTROL CERTIFICATE



Job ID : 10090607

Date : 9/29/2010

Analysis : Volatile Organic Compounds in Air by GCMS Method : EPA TO-15 Reporting Units : nL

QC Batch ID : Q010002911 Created Date : 09/29/10 Created By : Puraya

Samples in This QC Batch : 10090607.01,03

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Bromodichloromethane	5	4.69	93.8	5	4.12	82.4	12.9	30	60-140	
Dibromodichloromethane	5	4.83	96.6	5	3.84	76.8	22.8	30	60-140	



18288 East Fwy (I-38) Sec. 180  
Houston, TX 77029  
713-453-6000  
1-877-478-6000 Toll Free  
713-453-6001 Fax  
ablabs.com

1 Company: E&IH Services  
Address: 7511 Mulberry dr  
Sugar Land, TX 77478  
Contact: Dr. Deon  
Phone: 281-491-5458  
Fax: 281-207-6764  
Email: Sales@EIHService.net

2 Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

INVOICE TO: \_\_\_\_\_  
INVOICE NO: \_\_\_\_\_  
3 PO# \_\_\_\_\_

4 Turnaround Time (Business Days)  
 1 Day\*  Other  
 2 Days\*  
 3 Days\*  
 7 Days - Standard \*Surcharge applies

5. Project # 10090807  
6. Project Name/Location: Chase - 5847 SF

7. Reporting Requirement:  TIER 1 only  TIER 2 only  See Attached  Standard Level 1

8. Sampler's Name & Company (PLEASE PRINT): Dr. Deon / E&IH  
Sampler's Signature & Date: [Signature] 9/16/10

9. Sample ID and Description: ORA Chase - 01 - 09191610

ORA Chase - 02 - 09191610  
ORA Chase - 03 - 09191610

NO.	Sampling	Matrix				No. of Containers	13. SE Containers* 15. Preserving** 16. PHLAB Only	18. REMARKS
		11.	12.	13.	14.			
1	09161645	✓	✓	✓	✓	17	VOC 4 SVOC	EPA-TO-15 VOC - Volatile Semi-Volatile
2	09161652	✓	✓	✓	✓	17		

19. RELINQUISHED BY: [Signature]  
20. RECEIVED BY: [Signature]  
DATE: 9/20/10 TIME: 9:24

21. RECEIVED BY LABORATORY: \_\_\_\_\_  
22. HAZARD/HAZARDOUS COMMENTS: \_\_\_\_\_  
Temperature: 24.5  
Initials: DL

LAB USE ONLY: SAMPLING \_\_\_\_\_ RENTAL \_\_\_\_\_ FUEL \_\_\_\_\_

All-circuit accept unless changed  
Please FAX within 24hrs to 713-453-6001  
Sampling will be provided if - 30 days  
Lead time - 10 days





# Sample Condition Checklist

Date : 09/20/10

AMB JobID : 10090887		Date Received : 09/20/2010		Time Received : 09:24 AM								
Client Name : E & IH Services												
Temperature : 24.5°C		Sample pH : N/A										
<b>Check Points</b>												
		<b>Yes</b>	<b>No</b>	<b>N/A</b>								
1.	Cooler seal present and signed.		X									
2.	Sample(s) in a cooler.		X									
3.	If yes, ice in cooler.		X									
4.	Sample(s) received with chain-of-custody.	X										
5.	C-O-C signed and dated.	X										
6.	Sample(s) received with signed sample custody seal.		X									
7.	Sample containers arrived intact. (If no comment).	X										
8.	Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Bag	Food	Other
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Sample(s) were received in appropriate container(s).										X	
10.	Sample(s) were received with proper preservative										X	
11.	All samples were logged or labeled.										X	
12.	Sample ID labels match C-O-C ID's										X	
13.	Bottle count on C-O-C matches bottles found.										X	
14.	Sample volume is sufficient for analyses requested.										X	
15.	Samples were received within the hold time.										X	
16.	VDA vials completely filled.										X	
17.	Sample accepted.											X
Comments : Include actions taken to resolve discrepancies/problems:												
Other = cooler.												

Received by : Dipet

Check in by/date : Khargrave / 9/20/2010