ORIGINAL

SDMS DocID 2232169

LORD Corporation
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www.lord.com

Mr. David P. Turner, RPM (3HS22)
Western PA Section
United States Environmental Protection Agency, Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

June 14, 2010

Reference: LORD-Shope RA Monthly Progress Report

Dear Mr. Turner:

LORD is hereby submitting two copies of the monthly progress report for the period of May 1, 2010 through May 31, 2010.

The following work was conducted during this period:

REMEDIAL ACTION

NPDES Report:

The May report will be submitted under a separate cover.

Thermal Oxidizer:

The thermal oxidizer startup was on May 5th; and shutdown per 2010 operation schedule was on May 26th. Planned restart will occur on June 30th. The influent was 19.8 ppm with 98.7% removal efficiency. A copy of the laboratory report is attached for your review.

Groundwater Treatment:

The groundwater treatment system was operating normally during this interim.

The groundwater TOC effluent concentration was 1.3 mg/l.

Sincerely,

LORD Corporation

George M. Kickel
Director, Environment, Safety, Health, and Regulatory Compliance

GMK10014/cmf

cc: (b) (4) [redacted] – ARCADIS, Inc.
John Morettini, PADEP

ORIGINAL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

LORD Shope

Lot #: H0E140605

(b) (4) [redacted]

ARCADIS U.S., Inc.
284 Cramer Creek Court
Dublin, OH 43017

TESTAMERICA LABORATORIES, INC.

(b) (4) [redacted]

Project Manager

June 2, 2010

ORIGINAL

ANALYTICAL METHODS SUMMARY

H0E140605

PARAMETER	ANALYTICAL METHOD
Method for Analysis of Reformed Gas by GC	ASTM D 1946/E 260
Volatile Organics by TO15	EPA-2 TO-15

References:

ASTM Annual Book Of ASTM Standards.

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

ORIGINAL

SAMPLE SUMMARY

H0E140605

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L1J5C	001	TOI/051210	05/12/10	10:30
L1J5D	002	TOE/051210	05/12/10	10:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
HOE140605

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

Volatiles

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria. Even though the calibration verification analyzed on 5/19/10 exhibited a % difference of > 30% for 1,2,4-trichlorobenzene and hexachlorobutadiene, the results were within the LCS acceptance limits.

Although 1,2,4-trichlorobenzene and hexachlorobutadiene is flagged as being outside recovery limits in the laboratory control sample for batch 0140094, the laboratory control sample is in control. The standard operating procedure allows for 3 analytes to be outside the control limits, but within marginal exceedence limit.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

ORIGINAL

Sample Data Summary

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: TOI/051210

GC/MS Volatiles

Lot-Sample # H0E140605 - 001 Work Order # L1J5C1AA Matrix.....: AIR

Date Sampled...: 05/12/2010 Date Received..: 05/14/2010
Prep Date.....: 05/19/2010 Analysis Date... 05/19/2010
Prep Batch #.....: 0140094
Dilution Factor.: 550.24 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)		REPORTING LIMIT (ug/m3)
trans-1,3-Dichloropropene	ND	110	ND		500
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	110	ND		770
Acetone	ND	2800	ND		6500
1,4-Dioxane	ND	280	ND		990
Ethyl acetate	ND	1100	ND		4000
Ethylbenzene	ND	110	ND		480
Trichlorofluoromethane	**14**	**110**	**80**	**J**	**620**
n-Heptane	ND	280	ND		1100
Hexachlorobutadiene	ND	550	ND		5900
n-Hexane	**60**	**280**	**210**	**J**	**970**
2-Hexanone	ND	280	ND		1100
2,2,4-Trimethylpentane	ND	280	ND		1300
Cumene	ND	220	ND		1100
tert-Butyl alcohol	ND	1100	ND		3300
Methylene chloride	**180**	**280**	**640**	**J**	**960**
Methyl methacrylate	ND	280	ND		1100
Benzene	ND	110	ND		350
Acetonitrile	ND	550	ND		920
n-Octane	ND	220	ND		1000
Pentane	ND	550	ND		1600
Styrene	ND	110	ND		470
1,1,2,2-Tetrachloroethane	ND	110	ND		760
Tetrachloroethene	**510**	**110**	**3400**		**750**
Toluene	**38**	**110**	**140**	**J**	**410**
1,2,4-Trichlorobenzene	ND	550	ND		4100
1,1,1-Trichloroethane	**46**	**110**	**250**	**J**	**600**
1,1,2-Trichloroethane	ND	110	ND		600
Trichloroethene	**3000**	**110**	**16000**		**590**
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	110	ND		840
1,2,4-Trimethylbenzene	ND	110	ND		540
1,3,5-Trimethylbenzene	ND	110	ND		540
Vinyl acetate	ND	550	ND		1900
Vinyl chloride	**7400**	**110**	**19000**		**280**
o-Xylene	**94**	**110**	**410**	**J**	**480**
Methyl tert-butyl ether	ND	550	ND		2000
alpha-Methylstyrene	ND	220	ND		1100
Chlorodifluoromethane	ND	110	ND		390
m-Xylene & p-Xylene	**120**	**110**	**530**		**480**
Bromodichloromethane	ND	110	ND		740

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: TOI/051210

GC/MS Volatiles

Lot-Sample # H0E140605 - 001 Work Order # L1J5C1AA Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)		REPORTING LIMIT (ug/m3)
1,2-Dibromoethane (EDB)	ND	110	ND		850
2-Butanone (MEK)	ND	550	ND		1600
4-Methyl-2-pentanone (MIBK)	ND	280	ND		1100
Bromoform	ND	110	ND		1100
Bromomethane	ND	110	ND		430
1,3-Butadiene	ND	220	ND		490
4-Ethyltoluene	ND	220	ND		1100
Acrolein	ND	440	ND		1000
Carbon disulfide	ND	280	ND		860
Acrylonitrile	ND	1100	ND		2400
Carbon tetrachloride	ND	110	ND		690
Chlorobenzene	ND	110	ND		510
Dibromochloromethane	ND	110	ND		940
Chloroethane	ND	110	ND		290
Chloroform	**60**	**110**	**290**	**J**	**540**
Chloromethane	ND	280	ND		570
3-Chloropropene	ND	110	ND		340
Propene	**340**	**280**	**580**		**470**
Dibromomethane	ND	220	ND		1600
1,2-Dichlorobenzene	ND	110	ND		660
1,3-Dichlorobenzene	ND	110	ND		660
1,4-Dichlorobenzene	ND	110	ND		660
Dichlorodifluoromethane	ND	110	ND		540
1,1-Dichloroethane	**39**	**110**	**160**	**J**	**450**
1,2-Dichloroethane	ND	110	ND		450
1,1-Dichloroethene	**72**	**110**	**290**	**J**	**440**
cis-1,2-Dichloroethene	**7700**	**110**	**31000**		**440**
trans-1,2-Dichloroethene	**34**	**110**	**130**	**J**	**440**
1,2-Dichloropropane	ND	110	ND		510
cis-1,3-Dichloropropene	ND	110	ND		500

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	97	60 - 140

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: TOE/051210

GC/MS Volatiles

Lot-Sample # H0E140605 - 002 Work Order # L1J5D1AA Matrix.....: AIR

Date Sampled...: 05/12/2010 Date Received..: 05/14/2010
Prep Date.....: 05/19/2010 Analysis Date... 05/19/2010
Prep Batch #.....: 0140094
Dilution Factor.: 10 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)		REPORTING LIMIT (ug/m3)
trans-1,3-Dichloropropene	ND	2.0	ND		9.1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ND		14
Acetone	**51**	**50**	**120**		**120**
1,4-Dioxane	ND	5.0	ND		18
Ethyl acetate	**2.0**	**20**	**7.4**	**J**	**72**
Ethylbenzene	ND	2.0	ND		8.7
Trichlorofluoromethane	ND	2.0	ND		11
n-Heptane	**2.4**	**5.0**	**9.7**	**J**	**20**
Hexachlorobutadiene	ND	10	ND		110
n-Hexane	**2.2**	**5.0**	**7.8**	**J**	**18**
2-Hexanone	**17**	**5.0**	**70**		**20**
2,2,4-Trimethylpentane	ND	5.0	ND		23
Cumene	ND	4.0	ND		20
tert-Butyl alcohol	**12**	**20**	**35**	**J**	**61**
Methylene chloride	**1.9**	**5.0**	**6.6**	**J**	**17**
Methyl methacrylate	ND	5.0	ND		20
Benzene	ND	2.0	ND		6.4
Acetonitrile	ND	10	ND		17
n-Octane	**2.1**	**4.0**	**9.9**	**J**	**19**
Pentane	**1.6**	**10**	**4.7**	**J**	**30**
Styrene	ND	2.0	ND		8.5
1,1,2,2-Tetrachloroethane	ND	2.0	ND		14
Tetrachloroethene	ND	2.0	ND		14
Toluene	ND	2.0	ND		7.5
1,2,4-Trichlorobenzene	ND	10	ND		74
1,1,1-Trichloroethane	ND	2.0	ND		11
1,1,2-Trichloroethane	ND	2.0	ND		11
Trichloroethene	ND	2.0	ND		11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ND		15
1,2,4-Trimethylbenzene	ND	2.0	ND		9.8
1,3,5-Trimethylbenzene	ND	2.0	ND		9.8
Vinyl acetate	ND	10	ND		35
Vinyl chloride	ND	2.0	ND		5.1
o-Xylene	ND	2.0	ND		8.7
Methyl tert-butyl ether	ND	10	ND		36
alpha-Methylstyrene	ND	4.0	ND		19
Chlorodifluoromethane	ND	2.0	ND		7.1
m-Xylene & p-Xylene	ND	2.0	ND		8.7
Bromodichloromethane	ND	2.0	ND		13

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: TOE/051210

GC/MS Volatiles

Lot-Sample # H0E140605 - 002 Work Order # L1J5D1AA Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)		REPORTING LIMIT (ug/m3)
1,2-Dibromoethane (EDB)	ND	2.0	ND		15
2-Butanone (MEK)	52	10	150		29
4-Methyl-2-pentanone (MIBK)	0.67	5.0	2.7	J	20
Bromoform	ND	2.0	ND		21
Bromomethane	ND	2.0	ND		7.8
1,3-Butadiene	ND	4.0	ND		8.8
4-Ethyltoluene	ND	4.0	ND		20
Acrolein	ND	8.0	ND		18
Carbon disulfide	0.31	5.0	0.97	J	16
Acrylonitrile	ND	20	ND		43
Carbon tetrachloride	ND	2.0	ND		13
Chlorobenzene	ND	2.0	ND		9.2
Dibromochloromethane	ND	2.0	ND		17
Chloroethane	ND	2.0	ND		5.3
Chloroform	ND	2.0	ND		9.8
Chloromethane	ND	5.0	ND		10
3-Chloropropene	ND	2.0	ND		6.3
Propene	0.82	5.0	1.4	J	8.6
Dibromomethane	ND	4.0	ND		28
1,2-Dichlorobenzene	ND	2.0	ND		12
1,3-Dichlorobenzene	ND	2.0	ND		12
1,4-Dichlorobenzene	ND	2.0	ND		12
Dichlorodifluoromethane	ND	2.0	ND		9.9
1,1-Dichloroethane	ND	2.0	ND		8.1
1,2-Dichloroethane	ND	2.0	ND		8.1
1,1-Dichloroethene	ND	2.0	ND		7.9
cis-1,2-Dichloroethene	ND	2.0	ND		7.9
trans-1,2-Dichloroethene	ND	2.0	ND		7.9
1,2-Dichloropropane	ND	2.0	ND		9.2
cis-1,3-Dichloropropene	ND	2.0	ND		9.1

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	102	60 - 140

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample # H0E200000 - 094B Work Order # L1RPV1AA Matrix.....: AIR

	05/12/2010	Date Received..:	05/14/2010
Prep Date.....:	05/19/2010	Analysis Date...	05/19/2010
Prep Batch #.....:	0140094		
Dilution Factor.:	1	Method.....:	TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
trans-1,3-Dichloropropene	ND	0.20	ND	0.91
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.20	ND	1.4
Acetone	ND	5.0	ND	12
1,4-Dioxane	ND	0.50	ND	1.8
Ethyl acetate	ND	2.0	ND	7.2
Ethylbenzene	ND	0.20	ND	0.87
Trichlorofluoromethane	ND	0.20	ND	1.1
n-Heptane	ND	0.50	ND	2.0
Hexachlorobutadiene	ND	1.0	ND	11
n-Hexane	ND	0.50	ND	1.8
2-Hexanone	ND	0.50	ND	2.0
2,2,4-Trimethylpentane	ND	0.50	ND	2.3
Cumene	ND	0.40	ND	2.0
tert-Butyl alcohol	ND	2.0	ND	6.1
Methylene chloride	ND	0.50	ND	1.7
Methyl methacrylate	ND	0.50	ND	2.0
Benzene	ND	0.20	ND	0.64
Acetonitrile	ND	1.0	ND	1.7
n-Octane	ND	0.40	ND	1.9
Pentane	ND	1.0	ND	3.0
Styrene	ND	0.20	ND	0.85
1,1,2,2-Tetrachloroethane	ND	0.20	ND	1.4
Tetrachloroethene	ND	0.20	ND	1.4
Toluene	ND	0.20	ND	0.75
1,2,4-Trichlorobenzene	ND	1.0	ND	7.4
1,1,1-Trichloroethane	ND	0.20	ND	1.1
1,1,2-Trichloroethane	ND	0.20	ND	1.1
Trichloroethene	ND	0.20	ND	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.20	ND	1.5
1,2,4-Trimethylbenzene	ND	0.20	ND	0.98
1,3,5-Trimethylbenzene	ND	0.20	ND	0.98
Vinyl acetate	ND	1.0	ND	3.5
Vinyl chloride	ND	0.20	ND	0.51
o-Xylene	ND	0.20	ND	0.87
Methyl tert-butyl ether	ND	1.0	ND	3.6
alpha-Methylstyrene	ND	0.40	ND	1.9
Chlorodifluoromethane	ND	0.20	ND	0.71
m-Xylene & p-Xylene	ND	0.20	ND	0.87

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample # H0E200000 - 094B Work Order # L1RPV1AA Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Bromodichloromethane	ND	0.20	ND	1.3
1,2-Dibromoethane (EDB)	ND	0.20	ND	1.5
2-Butanone (MEK)	ND	1.0	ND	2.9
4-Methyl-2-pentanone (MIBK)	ND	0.50	ND	2.0
Bromoform	ND	0.20	ND	2.1
Bromomethane	ND	0.20	ND	0.78
1,3-Butadiene	ND	0.40	ND	0.88
4-Ethyltoluene	ND	0.40	ND	2.0
Acrolein	ND	0.80	ND	1.8
Carbon disulfide	ND	0.50	ND	1.6
Acrylonitrile	ND	2.0	ND	4.3
Carbon tetrachloride	ND	0.20	ND	1.3
Chlorobenzene	ND	0.20	ND	0.92
Dibromochloromethane	ND	0.20	ND	1.7
Chloroethane	ND	0.20	ND	0.53
Chloroform	ND	0.20	ND	0.98
Chloromethane	ND	0.50	ND	1.0
3-Chloropropene	ND	0.20	ND	0.63
Propene	ND	0.50	ND	0.86
Dibromomethane	ND	0.40	ND	2.8
1,2-Dichlorobenzene	ND	0.20	ND	1.2
1,3-Dichlorobenzene	ND	0.20	ND	1.2
1,4-Dichlorobenzene	ND	0.20	ND	1.2
Dichlorodifluoromethane	ND	0.20	ND	0.99
1,1-Dichloroethane	ND	0.20	ND	0.81
1,2-Dichloroethane	ND	0.20	ND	0.81
1,1-Dichloroethene	ND	0.20	ND	0.79
cis-1,2-Dichloroethene	ND	0.20	ND	0.79
trans-1,2-Dichloroethene	ND	0.20	ND	0.79
1,2-Dichloropropane	ND	0.20	ND	0.92
cis-1,3-Dichloropropene	ND	0.20	ND	0.91

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	102	60 - 140

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample #	H0E200000 - 094B	Work Order #	L1RPV1AA	Matrix.....:	AIR

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

Lot-Sample # H0E200000 - 094C Work Order # L1RPV1AC Matrix.....: AIR

	05/12/2010	Date Received..:	05/14/2010
Prep Date.....:	05/19/2010	Analysis Date...	05/19/2010
Prep Batch #.....:	0140094		
Dilution Factor.:	1	Method.....:	TO-15

PARAMETER	SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(v/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY		RECOVERY LIMITS
trans-1,3-Dichloropropene	10.0	9.31	45	42	93		70 - 130
1,2-Dichloro-1,1,2,2-tetrafluoroethane	10.0	8.65	70	60	86		60 - 140
Acetone	10.0	9.26	24	22	93		60 - 140
1,4-Dioxane	10.0	8.45	36	30	85		60 - 140
Ethyl acetate	10.0	10.0	36	36	100		60 - 140
Ethylbenzene	10.0	9.27	43	40	93		70 - 130
Trichlorofluoromethane	10.0	9.73	56	55	97		60 - 140
n-Heptane	10.0	8.78	41	36	88		70 - 130
Hexachlorobutadiene	10.0	5.93	110	63	59	a	60 - 140
n-Hexane	10.0	9.13	35	32	91		70 - 130
2-Hexanone	10.0	8.81	41	36	88		60 - 140
2,2,4-Trimethylpentane	10.0	8.60	47	40	86		70 - 130
Cumene	10.0	9.00	49	44	90		70 - 130
tert-Butyl alcohol	10.0	9.52	30	29	95		60 - 140
Methylene chloride	10.0	9.05	35	31	90		70 - 130
Methyl methacrylate	10.0	9.64	41	39	96		60 - 140
Benzene	10.0	8.19	32	26	82		70 - 130
Acetonitrile	10.0	10.4	17	17	104		60 - 140
n-Octane	10.0	8.89	47	42	89		70 - 130
Pentane	10.0	9.82	30	29	98		70 - 130
Styrene	10.0	9.34	43	40	93		70 - 130
1,1,2,2-Tetrachloroethane	10.0	9.24	69	63	92		70 - 130
Tetrachloroethene	10.0	8.54	68	58	85		70 - 130
Toluene	10.0	9.02	38	34	90		70 - 130
1,2,4-Trichlorobenzene	10.0	5.27	74	39	53	a	60 - 140
1,1,1-Trichloroethane	10.0	9.72	55	53	97		70 - 130
1,1,2-Trichloroethane	10.0	9.27	55	51	93		70 - 130
Trichloroethene	10.0	8.48	54	46	85		70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.58	77	73	96		70 - 130
1,2,4-Trimethylbenzene	10.0	7.63	49	38	76		70 - 130
1,3,5-Trimethylbenzene	10.0	8.03	49	39	80		70 - 130
Vinyl acetate	10.0	11.4	35	40	114		60 - 140
Vinyl chloride	10.0	9.55	26	24	95		70 - 130
o-Xylene	10.0	8.94	43	39	89		70 - 130
Methyl tert-butyl ether	10.0	9.95	36	36	99		60 - 140
alpha-Methylstyrene	10.0	8.47	48	41	85		60 - 140
Chlorodifluoromethane	10.0	9.50	35	34	95		60 - 140
m-Xylene & p-Xylene	20.0	18.2	87	79	91		70 - 130

ORIGINAL

ARCADIS U.S., Inc.

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

Lot-Sample # H0E200000 - 094C Work Order # L1RPV1AC Matrix.....: AIR

PARAMETER	SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(v/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
Bromodichloromethane	10.0	9.33	67	62	93	70 - 130
1,2-Dibromoethane (EDB)	10.0	9.12	77	70	91	70 - 130
2-Butanone (MEK)	10.0	9.76	29	29	98	60 - 140
4-Methyl-2-pentanone (MIBK)	10.0	8.94	41	37	89	60 - 140
Bromoform	10.0	11.0	100	110	110	70 - 130
Bromomethane	10.0	9.86	39	38	99	70 - 130
1,3-Butadiene	10.0	9.76	22	22	98	60 - 140
4-Ethyltoluene	10.0	8.52	49	42	85	70 - 130
Acrolein	10.0	11.0	23	25	110	60 - 140
Carbon disulfide	10.0	9.94	31	31	99	70 - 130
Acrylonitrile	10.0	10.4	22	22	104	60 - 140
Carbon tetrachloride	10.0	9.45	63	59	94	70 - 130
Chlorobenzene	10.0	8.57	46	39	86	70 - 130
Dibromochloromethane	10.0	10.3	85	88	103	70 - 130
Chloroethane	10.0	10.3	26	27	103	70 - 130
Chloroform	10.0	9.32	49	46	93	70 - 130
Chloromethane	10.0	9.41	21	19	94	60 - 140
3-Chloropropene	10.0	9.73	31	30	97	70 - 130
Propene	10.0	9.48	17	16	95	60 - 140
Dibromomethane	10.0	8.48	71	60	85	70 - 130
1,2-Dichlorobenzene	10.0	7.72	60	46	77	70 - 130
1,3-Dichlorobenzene	10.0	7.70	60	46	77	70 - 130
1,4-Dichlorobenzene	10.0	7.64	60	46	76	70 - 130
Dichlorodifluoromethane	10.0	9.79	49	48	98	60 - 140
1,1-Dichloroethane	10.0	9.44	40	38	94	70 - 130
1,2-Dichloroethane	10.0	9.02	40	37	90	70 - 130
1,1-Dichloroethene	10.0	9.79	40	39	98	70 - 130
cis-1,2-Dichloroethene	10.0	9.55	40	38	95	70 - 130
trans-1,2-Dichloroethene	10.0	9.92	40	39	99	70 - 130
1,2-Dichloropropane	10.0	8.73	46	40	87	70 - 130
cis-1,3-Dichloropropene	10.0	9.01	45	41	90	70 - 130

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	100	60 - 140

Qualifiers

a Spiked analyte recovery is outside stated control limits.

ORIGINAL

Sample Number	Sample Date/Time	Method	Analyte	Result	Detection L	Units	Qualifier
TOE/051210	5/12/2010 10:40	TO-15	Ethylbenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Styrene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	cis-1,3-Dichloropropene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	trans-1,3-Dichloropropene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,4-Dichlorobenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,2-Dibromoethane (EDB)	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,3-Butadiene	ND	4	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Acrolein	ND	8	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	3-Chloropropene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,2-Dichloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Acrylonitrile	ND	20	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Vinyl acetate	ND	10	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	4-Methyl-2-pentanone (MIBK)	0.67	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	1,3,5-Trimethylbenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Toluene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Chlorobenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Pentane	1.6	10	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	n-Hexane	2.2	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	n-Octane	2.1	4	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	Propene	0.82	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	1,2,4-Trichlorobenzene	ND	10	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,4-Dioxane	ND	5	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Dibromochloromethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Tetrachloroethene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	m-Xylene & p-Xylene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Ethyl acetate	2	20	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	n-Heptane	2.4	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	cis-1,2-Dichloroethene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	trans-1,2-Dichloroethene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Methyl tert-butyl ether	ND	10	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	4-Bromofluorobenzene	102		%	
TOE/051210	5/12/2010 10:40	TO-15	2,2,4-Trimethylpentane	ND	5	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,3-Dichlorobenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Carbon tetrachloride	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	2-Hexanone	17	5	PPB(V/V)	
TOE/051210	5/12/2010 10:40	TO-15	4-Ethyltoluene	ND	4	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Acetone	51	50	PPB(V/V)	
TOE/051210	5/12/2010 10:40	TO-15	Chloroform	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Benzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,1,1-Trichloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Bromomethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Chloromethane	ND	5	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Dibromomethane	ND	4	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Chloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Vinyl chloride	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Acetonitrile	ND	10	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Methylene chloride	1.9	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	Carbon disulfide	0.31	5	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	Bromoform	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Bromodichloromethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,1-Dichloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,1-Dichloroethene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Chlorodifluoromethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	tert-Butyl alcohol	12	20	PPB(V/V)	J
TOE/051210	5/12/2010 10:40	TO-15	Trichlorofluoromethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Dichlorodifluoromethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,1,2-Trichloro-1,2,2-trifluor	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,2-Dichloro-1,1,2,2-tetrafluo	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,2-Dichloropropane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	2-Butanone (MEK)	52	10	PPB(V/V)	
TOE/051210	5/12/2010 10:40	TO-15	1,1,2-Trichloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Trichloroethene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,1,2,2-Tetrachloroethane	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Methyl methacrylate	ND	5	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Hexachlorobutadiene	ND	10	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	o-Xylene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	1,2-Dichlorobenzene	ND	2	PPB(V/V)	U

ORIGINAL

TOE/051210	5/12/2010 10:40	TO-15	1,2,4-Trimethylbenzene	ND	2	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	Cumene	ND	4	PPB(V/V)	U
TOE/051210	5/12/2010 10:40	TO-15	alpha-Methylstyrene	ND	4	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	D 1946/E	Methane	0.23	0.18	%	
TOI/051210	5/12/2010 10:30	TO-15	Ethylbenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Styrene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	cis-1,3-Dichloropropene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	trans-1,3-Dichloropropene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,4-Dichlorobenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,2-Dibromoethane (EDB)	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,3-Butadiene	ND	220	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Acrolein	ND	440	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	3-Chloropropene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,2-Dichloroethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Acrylonitrile	ND	1100	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Vinyl acetate	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	4-Methyl-2-pentanone (MIBK)	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,3,5-Trimethylbenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Toluene	38	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Chlorobenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Pentane	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	n-Hexane	60	280	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	n-Octane	ND	220	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Propene	340	280	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	1,2,4-Trichlorobenzene	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,4-Dioxane	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Dibromochloromethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Tetrachloroethene	510	110	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	m-Xylene & p-Xylene	120	110	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	Ethyl acetate	ND	1100	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	n-Heptane	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	cis-1,2-Dichloroethene	7700	110	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	trans-1,2-Dichloroethene	34	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Methyl tert-butyl ether	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	4-Bromofluorobenzene	97		%	
TOI/051210	5/12/2010 10:30	TO-15	2,2,4-Trimethylpentane	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,3-Dichlorobenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Carbon tetrachloride	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	2-Hexanone	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	4-Ethyltoluene	ND	220	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Acetone	ND	2800	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Chloroform	60	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Benzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,1,1-Trichloroethane	46	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Bromomethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Chloromethane	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Dibromomethane	ND	220	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Chloroethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Vinyl chloride	7400	110	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	Acetonitrile	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Methylene chloride	180	280	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Carbon disulfide	ND	280	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Bromoform	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Bromodichloromethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,1-Dichloroethane	39	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	1,1-Dichloroethene	72	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Chlorodifluoromethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	tert-Butyl alcohol	ND	1100	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Trichlorofluoromethane	14	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	Dichlorodifluoromethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,1,2-Trichloro-1,2,2-trifluor	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,2-Dichloro-1,1,2,2-tetrafluo	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,2-Dichloropropane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	2-Butanone (MEK)	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,1,2-Trichloroethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Trichloroethene	3000	110	PPB(V/V)	
TOI/051210	5/12/2010 10:30	TO-15	1,1,2,2-Tetrachloroethane	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Methyl methacrylate	ND	280	PPB(V/V)	U

ORIGINAL

TOI/051210	5/12/2010 10:30	TO-15	Hexachlorobutadiene	ND	550	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	o-Xylene	94	110	PPB(V/V)	J
TOI/051210	5/12/2010 10:30	TO-15	1,2-Dichlorobenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	1,2,4-Trimethylbenzene	ND	110	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	Cumene	ND	220	PPB(V/V)	U
TOI/051210	5/12/2010 10:30	TO-15	alpha-Methylstyrene	ND	220	PPB(V/V)	U