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Weatherford.Jeffrey@epamail.epa.gov

May 29, 2009

Jeffrey Weatherford
U.S. Environmental Protection Agency
212 Little Bussen Drive
Fenton, Missouri 63026

RE: Limited Groundwater Investigation Report for Vapor Intrusion Study
Former Carter Carburetor Site, St. Louis, Missouri

Dear Mr. Weatherford:

Enclosed is the "Limited Groundwater Investigation Report for Vapor Intrusion Study, Former Carter Carburetor Site, St. Louis, Missouri." Also attached is the proposal to conduct vapor sampling at the Site. The results of the Limited Groundwater Investigation and the earlier sub-slab vapor sampling conducted by the USEPA were used in developing the scope of work for the Vapor Intrusion Sampling.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

A handwritten signature in blue ink, appearing to read "Chris L. Tedder".

Chris L. Tedder, P.G.
Project Manager

A handwritten signature in black ink, appearing to read "Mark H. Kroenig".

Mark H. Kroenig, P.E.
Senior Principal

Copies to:
Mr. Richard Hyink, ACF Industries LLC

**Limited Groundwater Investigation Report
For Vapor Intrusion Study
Former Carter Carburetor Site
St. Louis, Missouri**

Prepared for:
ACF Industries LLC
St. Charles, Missouri

Prepared by:



MACTEC Engineering and Consulting, Inc.
St. Louis, Missouri

May 29, 2009
MACTEC Project No. 3250055164.21

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List of Abbreviations and Acronyms

ACF	ACF Industries LLC
AST	aboveground storage tank
bgs	below ground surface
CBI	Carter Building, Inc.
cis-DCE	cis-1,2-dichloroethylene
LRA	Land Reutilization Authority
MACTEC	MACTEC Engineering and Consulting, Inc.
MDNR	Missouri Department of Natural Resources
mg/kg	milligrams per kilogram
PCE	tetrachloroethylene
Philip	Philip Environmental Services, Inc.
PVC	polyvinyl chloride
SRE	Streamlined Risk Evaluation
TCE	trichloroethylene
trans-DCE	trans-1,2-dichloroethylene
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VC	Vinyl Chloride
VI	vapor intrusion
VOCs	volatile organic compounds

1.0 Introduction

This Limited Groundwater Investigation for the Former Carter Carburetor Site presents the results of groundwater sampling at the Former Carter Carburetor site (Site) located at 2800-2840 North Spring Avenue, St. Louis, Missouri. This investigation was performed for ACF Industries LLC (ACF) by MACTEC Engineering and Consulting, Inc. (MACTEC). Figure 1 displays the location of the Site.

1.1 Purpose

The purpose of the Limited Groundwater Investigation was to further characterize trichloroethylene (TCE) and associated volatile organic compounds (VOCs) in groundwater at the Site in order to refine the vapor intrusion (VI) characterization study at the Site.

2.0 Site Background Information

This section of the Limited Groundwater Investigation for the Former Carter Carburetor Site presents background information pertaining to the operational history and environmental setting for the Site.

2.1 Site Location

The Carter Carburetor Site is located at 2800-2840 North Spring Street in the north-central portion of the City of St. Louis, in a mixed residential and commercial neighborhood. The surrounding area is composed primarily of medium to low income residential dwellings, with commercial development along arterial roads. The site is located on the west side of Grand Boulevard bounded by St. Louis Avenue to the southwest, Dodier to the northeast and Spring Avenue to the northwest. The Herbert Hoover Boys and Girls Club is located to the north across Dodier Street. Residences are located west of Spring Street, and east of Grand Street Boulevard from the Site. The Site is 80 feet in elevation above the Mississippi River and is not within the river's 100-year floodplain zone.

2.2 Site History

ACF owned the Carter Carburetor Site from the 1930's until April 26, 1984, when the entire property and buildings were conveyed to the Land Reutilization Authority of the City of St. Louis, Missouri (LRA). During ACF's ownership, the facility was operated by the Carter Carburetor Corporation and Carter Automotive Products, who manufactured carburetors for use on gasoline or diesel powered equipment. When ACF closed the facility in 1984, the manufacturing lines were dismantled and most of the equipment was shipped to new locations or

sold. Former manufacturing processes within these buildings utilized various hydraulic/lubricating oils, fuels, paints, cleaning solvents, and dielectric fluid as part of their ongoing operations. Underground storage tanks (USTs), aboveground storage tanks (ASTs), and drums were used to store chemical products/residues inside and outside of the buildings. At the time the property was deeded to LRA, access to the buildings on the Site was strictly controlled. The Site is currently partially surrounded by a chain-link fence.

On April 25, 1985, LRA deeded the Carter Carburetor site to Hubert and Sharon Thompson. On January 9, 1986, the Thompson's sold a portion of the Carter Carburetor Site to Edward Pivirotto and his wife. The Pivirottos subsequently failed to pay the real estate taxes on the portion of the property they owned, resulting in a Sheriff's sale on August 20-22, 1991. Because no substantive bids were received at the sale, the property reverted to LRA. Thus, on February 2, 1992, LRA became the owner of the northeastern portion of the Carter Carburetor site previously owned by the Pivirottos and the location of the Warehouse and North and South Diecast buildings.

Meanwhile on June 20, 1989, Carter Building, Inc. (CBI), a Delaware Corporation, (no relation to ACF or Carter Carburetor) entered into a Lease and Option to Purchase Agreement with Hubert and Sharon Thompson. Following the filing of a suit for breach of contract and specific performance and a subsequent foreclosure proceeding, CBI received a Trustee's Deed under foreclosure for the facility from the Missouri Title Company, John E. O'Brien, Successor Trustee in October 1991.

3.0 Environmental Field Investigation Activities

MACTEC has conducted Site Characterization activities at the Site for ACF since 2005. In 2005, Philip Environmental Services (Philip) installed four groundwater wells at the Site in order to determine groundwater flow direction at the Site and to obtain groundwater samples. Additional groundwater wells were installed at the Site by MACTEC in order to determine petroleum impacts from USTs which were closed in place by ACF prior to sale of the Site in 1985.

In September, 2008 a United States Environmental Protection Agency (USEPA) field team installed sub-slab vapor sampling points at 55 locations in the CBI Building and 12 locations within the Willco Plastics Building. The sample locations and TCE concentrations are shown on Figure 2. The USEPA vapor sampling effort focused on TCE and associated constituents, with TCE as the primary focus of the investigation.

Ten new groundwater wells and one replacement groundwater well (PZ-04W, initially installed by Philip) were installed by MACTEC in 2009 in order to further characterize the TCE impacts and to aid in the on-going VI study (Figure 2). During the 2009 well installation activities, soil and groundwater samples from the new well borings and groundwater samples from the existing wells were collected and analyzed for TCE, cis-1,2-dichloroethylene (cis-DCE), trans-1,2-dichloroethylene (trans-DCE), tetrachloroethylene (PCE), and vinyl chloride (VC). The results of these analyses and the results of the USEPA sub-slab vapor intrusion sampling were then used to determine the proposed VI sampling locations. One proposed groundwater well, ME-Q9, was not installed due to unexpected obstructions encountered during drilling. A second attempt to install a well near the northeast corner of the CBI Building is planned.

The newly installed wells are small diameter groundwater wells, installed in accordance with Missouri Department of Natural Resources (MDNR) guidelines, with Variance Number 4185 issued by the MDNR for the installation of small diameter wells using direct push technology and one-inch prepacked screen and one-inch riser pipe.

During the installation of the wells, soil samples were collected from each boring with the exception of boring MW-EE1, which was installed within 18-inches of boring TCE-T-15, installed during the TCE AST area investigation. The soils within the boring for the replacement well at PZ-04W were sampled. The soil borings were logged by a MACTEC geologist, screened for organic vapors, and sampled at discrete depths within the near-surface zone (0 to 3 feet below ground surface (bgs), the intermediate (unsaturated) zone (3 to 13 feet bgs), the capillary fringe zone, and from the base of the boring (at refusal on bedrock, with bedrock depths ranging from 24 to 26.5 feet bgs).

The samples collected from the soil borings were placed into laboratory supplied sample jars, labeled, and placed on ice for transport to the Pace Analytical Lenexa, Kansas facility for analysis. The samples were shipped using standard chain-of-custody procedures to ensure sample integrity. The samples were collected using USEPA Method 5035 and analyzed for the target VOCs by USEPA Method 8260. The soil sample analytical results are summarized in Table 1 and the complete analytical results and chain-of-custody forms are included as Appendix A.

Upon completion of the soil borings, the small diameter well material was installed at bedrock, with screen installed through the entire saturated zone. The wells were completed with expandable locking well caps and flush mount covers.

The groundwater wells were developed upon installation and allowed to recover prior to purging and sampling. Dedicated polyvinyl chloride (PVC) bailers were used for purging and sampling all wells. The groundwater samples collected from each well were collected into laboratory supplied jars, labeled, and placed on ice for transport to the Pace Analytical Lab's Lenexa, Kansas facility for analysis. A completed chain-of-custody form was placed in each storage container to accompany the samples to the laboratory.

Groundwater samples were analyzed for the target VOCs as noted above. The laboratory analytical results for the groundwater samples are summarized in Table 2 and the complete analytical results and chain-of-custody forms are included as Appendix A.

3.1 Analytical Results for Limited Groundwater Investigation

3.1.1 Analytical Results – Groundwater

A total of 23 groundwater samples were submitted for analysis of target VOCs by USEPA Method 8260. This included 10 new monitoring wells, one replacement monitoring well, nine existing monitoring wells, and three duplicate samples. The groundwater impacted above the remedial action goals established in the Streamlined Risk Evaluation (SRE) is located within the outline of the CBI Building, primarily in the south-central portion. The results of the groundwater sampling event are shown on Figure 2.

3.1.2 Analytical Results - Soil

A total of 35 soil samples (plus four duplicate samples) were collected from eleven soils borings. The maximum TCE concentration detected was the sample collected from one foot bgs from boring SS-MW-FF-4, at 55.7 milligrams per kilogram (mg/kg) (55,700 micrograms per kilogram (ug/kg)). No other soil samples were found to contain TCE above 0.3 mg/kg. The TCE in soil remedial action goal derived in the SRE is 52.9 mg/kg. The maximum TCE in soil concentration from each boring and the maximum TCE in soil concentration from previous investigations are shown on Figure 3.

4.0 Summary

Groundwater is present at the Site at depths ranging from 7 feet bgs to 20 feet bgs. The groundwater flow direction is generally toward the southeast. Soils encountered within the borings were consistent with earlier soils, with the soil profile consisting of an upper fill unit overlying low to medium plastic silty clay, becoming more plastic with depth. The borings were advanced to bedrock at depths ranging from 18 to 30 feet bgs.

The sub-slab vapor sampling analyses is generally consistent with the location of the impacted groundwater, although some anomalies occur. Two areas will be targeted for additional investigation. These areas are the northeast corner of the CBI Building and the south end of the CBI Building. MACTEC has submitted a proposal to ACF (attached) for additional soil gas sampling and for the installation of an additional well. The additional well will be installed near the northeast corner of the CBI Building. The additional soil gas sample points are near the northeast corner of the CBI Building and along the south edge of the CBI Building. The proposed vapor sample locations are depicted on Figure 2. The additional groundwater well will be in the vicinity of soil boring MW-Q9, with the actual location dependent on subsurface conditions. The boring installed at location MW-Q9 was terminated on concrete at 8 feet bgs.

TABLES

Table 1. Target VOCs in Soil, Vapor Intrusion Investigation, Carter Carburetor, March 2009

Parameter	Units	Soil Sampling Locations																	
		SS-MW-AA-6						SS-MW-C-1						SS-MW-DD-19					
		2	18	3	9	14	26.5	3	19	24	1	13	30	3	9	13	13 Dup	27	27 Dup
Cis-1,2-Dichloroethylene	ug/kg	< 5.6	152	< 5.2	< 5.8	< 4.8	< 7.4	< 4.6	< 4.5	< 5.8	7,990	34.8	< 5.1	< 6.7	< 7.4	< 5.4	< 7.3	< 7.2	< 5.3
Tetrachloroethylene	ug/kg	< 5.6	< 5	< 5.2	18.9	13.5	< 7.4	< 4.6	< 4.5	< 5.8	< 7.6	< 6.9	< 5.1	< 6.7	< 7.4	< 5.4	< 7.3	< 7.2	< 5.3
Trans-1,2-Dichloroethylene	ug/kg	< 5.6	< 5	< 5.2	< 5.8	< 4.8	< 7.4	< 4.6	< 4.5	< 5.8	34.5	< 6.9	< 5.1	< 6.7	< 7.4	< 5.4	< 7.3	< 7.2	< 5.3
Trichloroethylene	ug/kg	180	262	< 5.2	26.2	23.6	< 7.4	4.8	< 4.5	< 5.8	55,700	108	< 5.1	< 6.7	< 7.4	< 5.4	< 7.3	< 7.2	< 5.3
Vinyl Chloride	ug/kg	< 5.6	24.1	< 5.2	< 5.8	< 4.8	< 7.4	< 4.6	< 4.5	< 5.8	< 7.6	< 6.9	< 5.1	< 6.7	< 7.4	< 5.4	< 7.3	< 7.2	< 5.3

Parameter	Units	Soil Sampling Locations																	
		SS-MW-KK-15						SS-MW-PP-10						SS-MW-Q-9					
		3	17	20	1	17	20	3	8	3	10	15	20	1	13	16	18	3	18
Cis-1,2-Dichloroethylene	ug/kg	< 5	< 5.2	< 5.4	9.6	42.7	126	< 5.4	< 6.5	< 5.7	< 5.4	< 4.9	< 6.4	< 6.6	< 5.2	64.8	52.3	< 6.2	< 6.3
Tetrachloroethylene	ug/kg	< 5	< 5.2	< 5.4	< 5.2	< 5.3	< 6.4	< 5.4	< 6.5	< 5.7	< 5.4	< 4.9	< 6.4	< 6.6	< 5.2	< 5.2	< 6.3	< 6.2	< 235
Trans-1,2-Dichloroethylene	ug/kg	< 5	< 5.2	< 5.4	< 5.2	< 5.3	< 6.4	< 5.4	< 6.5	< 5.7	< 5.4	< 4.9	< 6.4	< 6.6	< 5.2	< 5.2	< 6.3	< 6.2	< 235
Trichloroethylene	ug/kg	< 5	< 5.2	< 5.4	53.8	67.4	236	< 5.4	< 6.5	< 5.7	< 5.4	< 4.9	< 6.4	< 6.6	32.7	93.3	64.6	6.8	< 6.3
Vinyl Chloride	ug/kg	< 5	< 5.2	< 5.4	< 5.2	< 5.3	< 6.4	< 5.4	< 6.5	< 5.7	< 5.4	< 4.9	< 6.4	< 6.6	< 5.2	< 5.2	< 6.3	< 6.2	< 235

Notes:

ug/kg - microgram per kilogram

< - constituent not detected above this value

Bold - Detection

Created by: Lana Smith
Reviewed by: Chris Tedder

Table 2. Target VOCs in Groundwater, Vapor Intrusion Investigation, Carter Carburetor, March 2009

Parameter	Unit	Groundwater Sampling Locations										
		GW-MW-AA-6	GW-MW-C-1	GW-MW-DD-19	GW-MW-EE-1	GW-MW-FF-4	GW-MW-H-1	GW-MW-H-1 Dup	GW-MW-KK-15	GW-MW-PP-10	GW-MW-QQ-15 Dup	GW-MW-RR-5
Cis-1,2-Dichloroethylene	mg/l	0.478	0.0284	0.0153	0.122	1.7	< 0.001	< 0.001	< 0.001	0.211	< 0.001	0.172
Tetrachloroethylene	mg/l	< 0.01	< 0.001	< 0.001	< 0.001	< 0.02	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005
Trans-1,2-Dichloroethylene	mg/l	< 0.01	< 0.001	< 0.001	< 0.001	< 0.02	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005
Trichloroethylene	mg/l	0.674	0.0049	0.0195	< 0.001	0.02	< 0.001	< 0.001	< 0.001	0.362	< 0.001	0.175
Vinyl Chloride	mg/l	0.0649	0.0054	< 0.001	0.0975	1.85	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005

Parameter	Unit	Groundwater Sampling Locations										
		PZ-01	PZ-02W	PZ-04W	UST-01W	UST-03W	UST-04W	UST-06W	UST-07W	UST-07W Dup	UST-08W	UST-09W
Cis-1,2-Dichloroethylene	mg/l	< 0.001	0.0298	0.0097	0.0011	< 0.001	0.789	35.3	< 0.001	< 0.001	0.335	< 0.001
Tetrachloroethylene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.1	0.0037	0.0036	< 0.005	< 0.001
Trans-1,2-Dichloroethylene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	0.205	< 0.001	< 0.001	< 0.005	< 0.001
Trichloroethylene	mg/l	< 0.001	0.0038	0.0027	< 0.001	0.0017	0.0413	3.73	0.0285	0.0268	0.344	< 0.001
Vinyl Chloride	mg/l	< 0.001	< 0.001	0.0337	< 0.001	< 0.001	0.154	5.7	< 0.001	< 0.001	0.054	< 0.001

Notes:

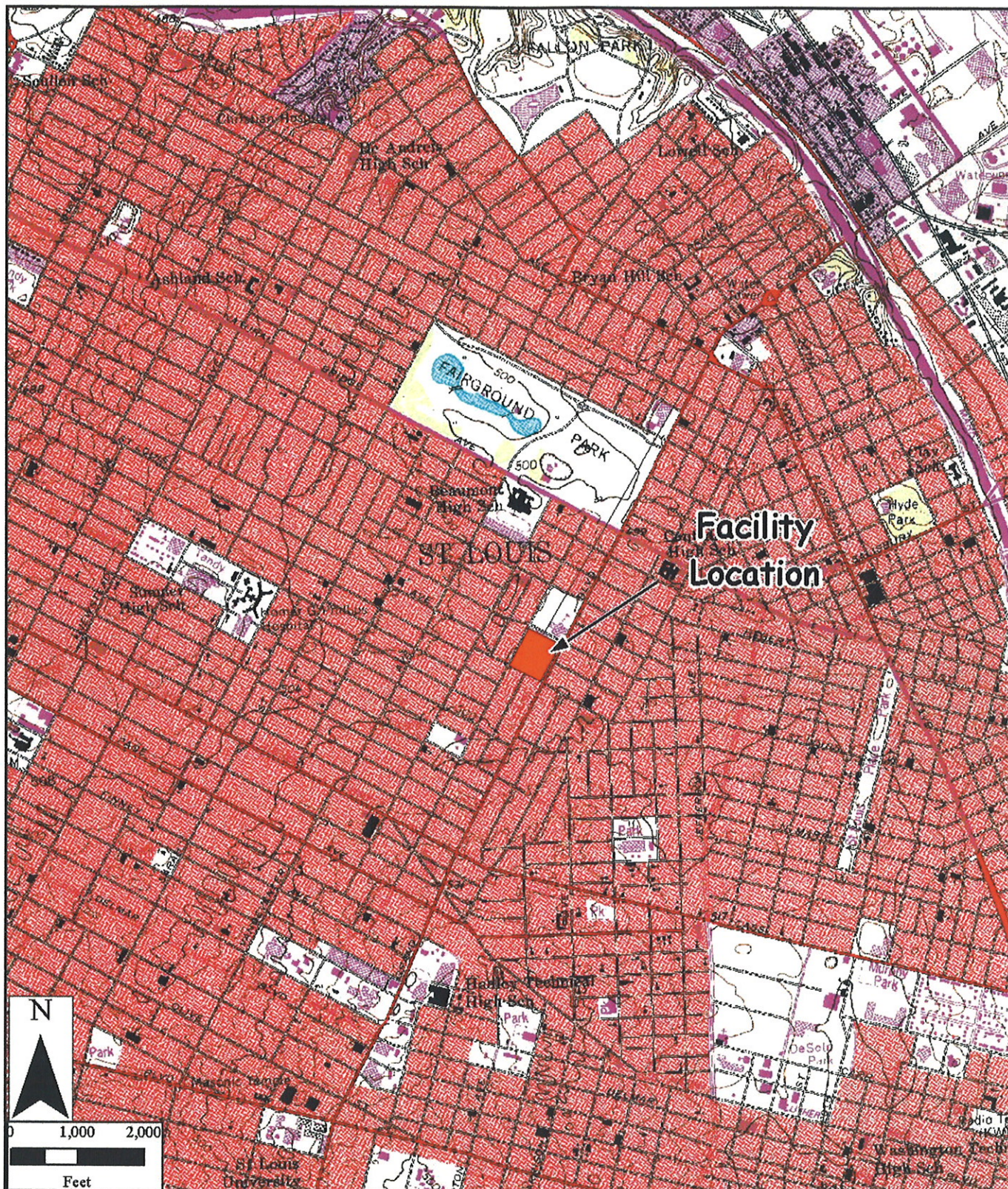
mg/L - milligrams per liter

< - constituent not detected above this value

Bold - Detection

Created by: Lana Smith
Reviewed by: Chris Tedder

FIGURES



Legend

Facility Location

Drawn By: BSM

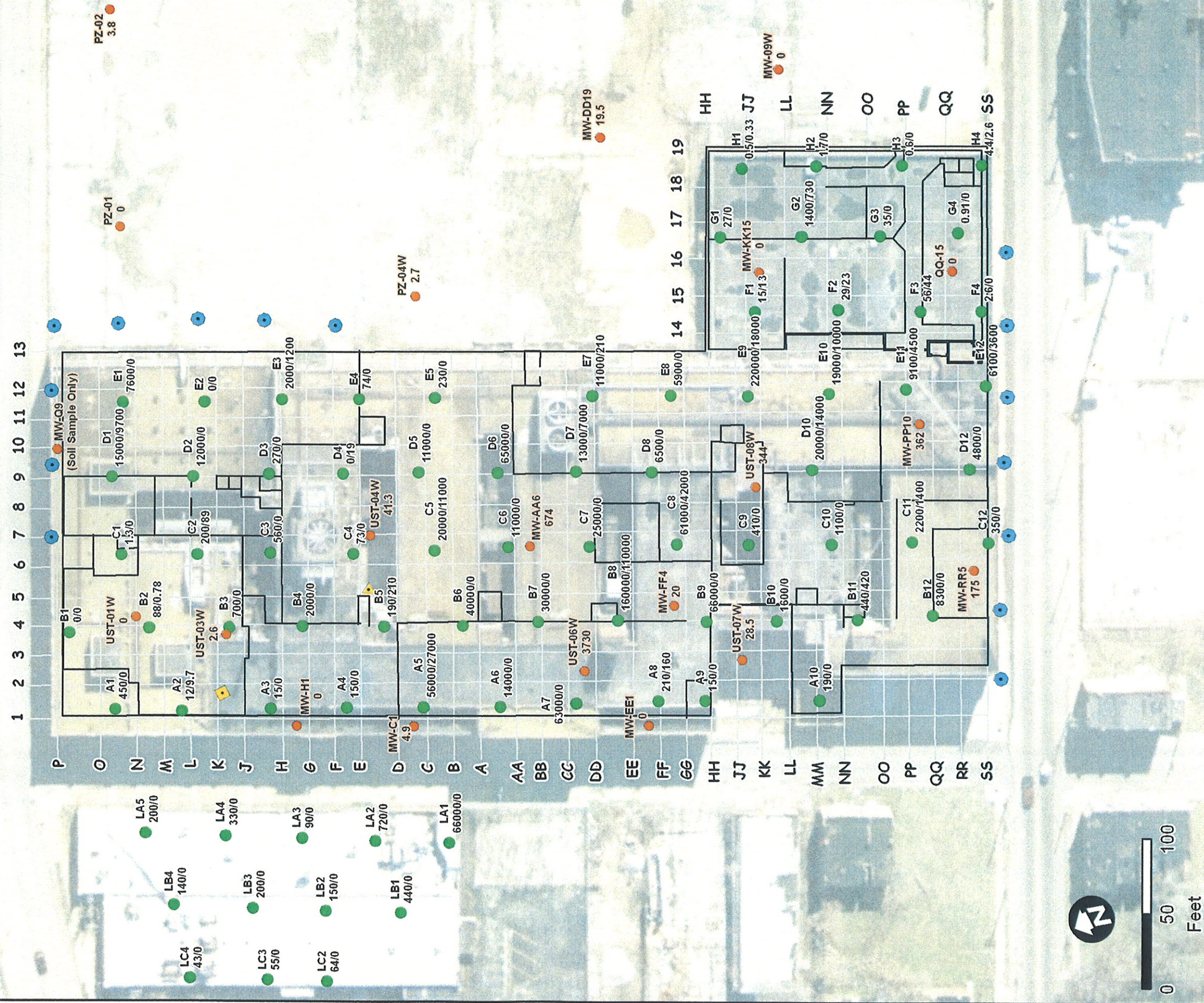
Approved by: EMW

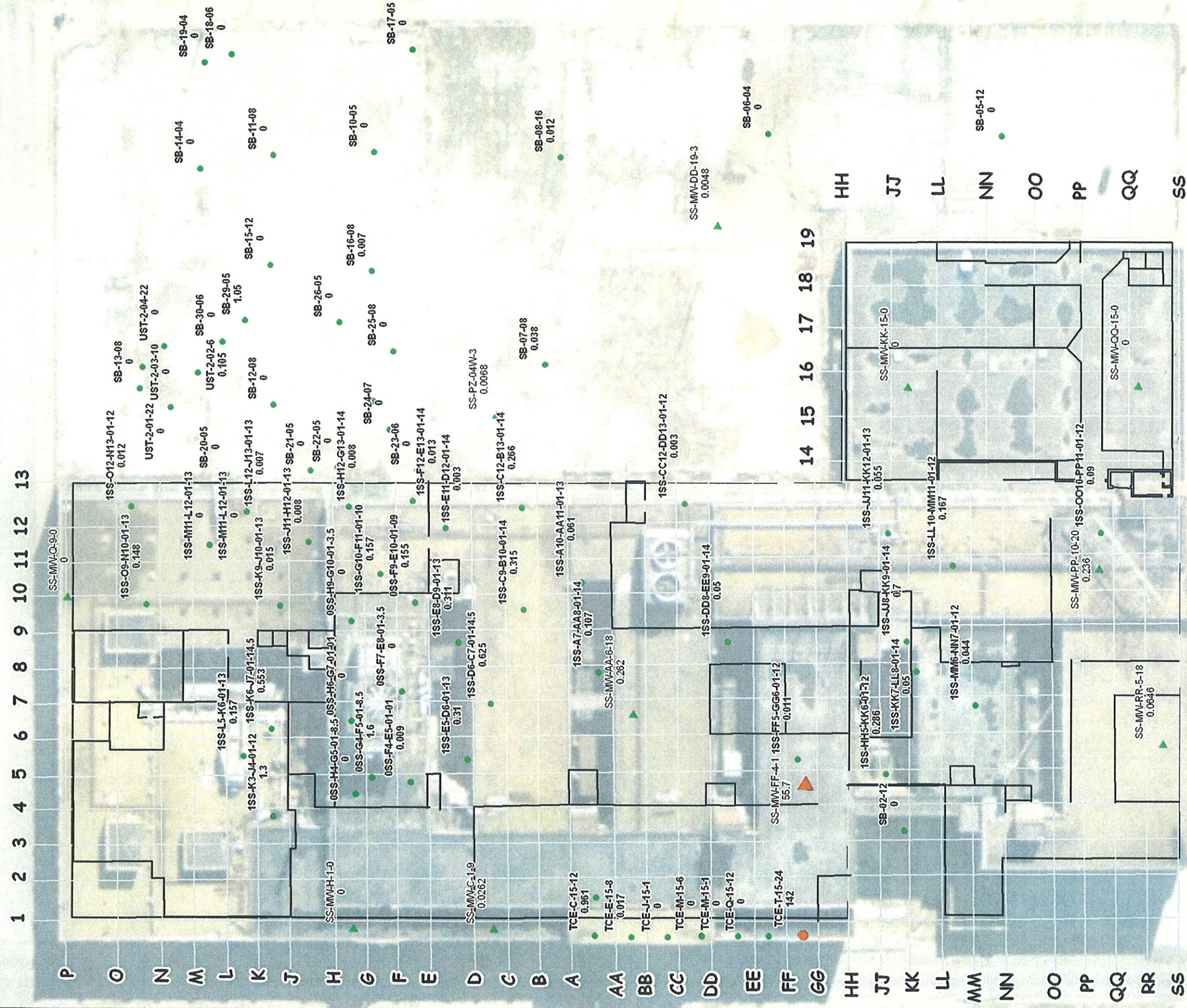
Checked By: CLT

Date: January 14, 2007



Figure 1-1
Site Location Map
 Former Carter Carburetor Site
 St. Louis, Missouri





Drawn By: CGS

Approved by: EMW

Checked By: CLT

May 28, 2009



Appendix A

Analytical Laboratory Reports and Chain-of-Custody Forms

April 08, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: CARTER CARBURATOR
Pace Project No.: 6056395

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 01, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 20

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CERTIFICATIONS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6056395001	SS-MW-RR-5-01	Solid	03/31/09 12:20	04/01/09 09:45
6056395002	SS-MW-RR-5-13	Solid	03/31/09 12:30	04/01/09 09:45
6056395003	SS-MW-RR-5-16	Solid	03/31/09 12:35	04/01/09 09:45
6056395004	SS-MW-RR-5-18	Solid	03/31/09 12:40	04/01/09 09:45
6056395005	SS-MW-QQ-15-03	Solid	03/31/09 14:15	04/01/09 09:45
6056395006	SS-MW-QQ-15-10	Solid	03/31/09 14:20	04/01/09 09:45
6056395007	SS-MW-QQ-15-15	Solid	03/31/09 14:25	04/01/09 09:45
6056395008	SS-MW-QQ-15-20	Solid	03/31/09 14:35	04/01/09 09:45
6056395009	TRIP BLANK	Solid	03/31/09 00:00	04/01/09 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6056395001	SS-MW-RR-5-01	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395002	SS-MW-RR-5-13	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395003	SS-MW-RR-5-16	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395004	SS-MW-RR-5-18	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395005	SS-MW-QQ-15-03	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395006	SS-MW-QQ-15-10	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395007	SS-MW-QQ-15-15	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395008	SS-MW-QQ-15-20	ASTM D2974-87	TM	1
		EPA 8260	BAG	9
6056395009	TRIP BLANK	EPA 8260	BAG	9

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Method: EPA 8260

Description: 8260 MSV 5035A VOA

Client: Mactec

Date: April 08, 2009

General Information:

9 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/20384

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- SS-MW-QQ-15-15 (Lab ID: 6056395007)
- 4-Bromofluorobenzene (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Method: ASTM D2974-87

Description: Percent Moisture

Client: Mactec

Date: April 08, 2009

General Information:

8 samples were analyzed for ASTM D2974-87. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: SS-MW-RR-5-01 **Lab ID:** 6056395001 Collected: 03/31/09 12:20 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	6.6	1		04/03/09 17:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.6	1		04/03/09 17:51	156-60-5	
Tetrachloroethene	ND	ug/kg	6.6	1		04/03/09 17:51	127-18-4	
Trichloroethene	ND	ug/kg	6.6	1		04/03/09 17:51	79-01-6	
Vinyl chloride	ND	ug/kg	6.6	1		04/03/09 17:51	75-01-4	
Dibromofluoromethane (S)	92	%	68-129	1		04/03/09 17:51	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		04/03/09 17:51	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-131	1		04/03/09 17:51	460-00-4	
1,2-Dichloroethane-d4 (S)	83	%	77-131	1		04/03/09 17:51	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	19.6	%	0.10	1		04/02/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-RR-5-13** Lab ID: **6056395002** Collected: 03/31/09 12:30 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/03/09 18:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/03/09 18:08	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/03/09 18:08	127-18-4	
Trichloroethene	32.7	ug/kg	5.2	1		04/03/09 18:08	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/03/09 18:08	75-01-4	
Dibromofluoromethane (S)	96	%	68-129	1		04/03/09 18:08	1868-53-7	
Toluene-d8 (S)	104	%	81-121	1		04/03/09 18:08	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/03/09 18:08	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	77-131	1		04/03/09 18:08	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	20.1	%	0.10	1		04/02/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-RR-5-16** Lab ID: **6056395003** Collected: 03/31/09 12:35 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	64.8	ug/kg	5.2	1		04/03/09 18:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/03/09 18:25	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/03/09 18:25	127-18-4	
Trichloroethene	93.3	ug/kg	5.2	1		04/03/09 18:25	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/03/09 18:25	75-01-4	
Dibromofluoromethane (S)	96	%	68-129	1		04/03/09 18:25	1868-53-7	
Toluene-d8 (S)	103	%	81-121	1		04/03/09 18:25	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131	1		04/03/09 18:25	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	77-131	1		04/03/09 18:25	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	21.6	%	0.10	1		04/02/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-RR-5-18** Lab ID: **6056395004** Collected: 03/31/09 12:40 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	52.3	ug/kg	6.3	1		04/06/09 16:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.3	1		04/06/09 16:29	156-60-5	
Tetrachloroethene	ND	ug/kg	6.3	1		04/06/09 16:29	127-18-4	
Trichloroethene	64.6	ug/kg	6.3	1		04/06/09 16:29	79-01-6	
Vinyl chloride	ND	ug/kg	6.3	1		04/06/09 16:29	75-01-4	
Dibromofluoromethane (S)	99	%	68-129	1		04/06/09 16:29	1868-53-7	
Toluene-d8 (S)	106	%	81-121	1		04/06/09 16:29	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/06/09 16:29	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	77-131	1		04/06/09 16:29	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	23.8	%	0.10	1		04/02/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-QQ-15-03** Lab ID: **6056395005** Collected: 03/31/09 14:15 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1		04/03/09 19:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	1		04/03/09 19:00	156-60-5	
Tetrachloroethene	ND	ug/kg	5.7	1		04/03/09 19:00	127-18-4	
Trichloroethene	ND	ug/kg	5.7	1		04/03/09 19:00	79-01-6	
Vinyl chloride	ND	ug/kg	5.7	1		04/03/09 19:00	75-01-4	
Dibromofluoromethane (S)	96	%	68-129	1		04/03/09 19:00	1868-53-7	
Toluene-d8 (S)	104	%	81-121	1		04/03/09 19:00	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131	1		04/03/09 19:00	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	77-131	1		04/03/09 19:00	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.1	%	0.10	1		04/02/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-QQ-15-10** Lab ID: **6056395006** Collected: 03/31/09 14:20 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/03/09 19:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/03/09 19:17	156-60-5	
Tetrachloroethene	ND	ug/kg	5.4	1		04/03/09 19:17	127-18-4	
Trichloroethene	ND	ug/kg	5.4	1		04/03/09 19:17	79-01-6	
Vinyl chloride	ND	ug/kg	5.4	1		04/03/09 19:17	75-01-4	
Dibromofluoromethane (S)	107	%	68-129	1		04/03/09 19:17	1868-53-7	
Toluene-d8 (S)	112	%	81-121	1		04/03/09 19:17	2037-26-5	
4-Bromofluorobenzene (S)	109	%	75-131	1		04/03/09 19:17	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	77-131	1		04/03/09 19:17	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	20.6	%	0.10	1		04/02/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-QQ-15-15** Lab ID: **6056395007** Collected: 03/31/09 14:25 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	4.9	1		04/03/09 19:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.9	1		04/03/09 19:35	156-60-5	
Tetrachloroethene	ND	ug/kg	4.9	1		04/03/09 19:35	127-18-4	
Trichloroethene	ND	ug/kg	4.9	1		04/03/09 19:35	79-01-6	
Vinyl chloride	ND	ug/kg	4.9	1		04/03/09 19:35	75-01-4	
Dibromofluoromethane (S)	98	%	68-129	1		04/03/09 19:35	1868-53-7	
Toluene-d8 (S)	106	%	81-121	1		04/03/09 19:35	2037-26-5	
4-Bromofluorobenzene (S)	161	%	75-131	1		04/03/09 19:35	460-00-4	S1
1,2-Dichloroethane-d4 (S)	92	%	77-131	1		04/03/09 19:35	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	21.4	%	0.10	1		04/02/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: **SS-MW-QQ-15-20** Lab ID: **6056395008** Collected: 03/31/09 14:35 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	6.4	1		04/06/09 17:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.4	1		04/06/09 17:03	156-60-5	
Tetrachloroethene	ND	ug/kg	6.4	1		04/06/09 17:03	127-18-4	
Trichloroethene	ND	ug/kg	6.4	1		04/06/09 17:03	79-01-6	
Vinyl chloride	ND	ug/kg	6.4	1		04/06/09 17:03	75-01-4	
Dibromofluoromethane (S)	99	%	68-129	1		04/06/09 17:03	1868-53-7	
Toluene-d8 (S)	106	%	81-121	1		04/06/09 17:03	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-131	1		04/06/09 17:03	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	77-131	1		04/06/09 17:03	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	24.9 %	0.10	1	04/02/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Sample: TRIP BLANK **Lab ID: 6056395009** Collected: 03/31/09 00:00 Received: 04/01/09 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/03/09 20:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/03/09 20:09	156-60-5	
Tetrachloroethene	ND	ug/kg	5.0	1		04/03/09 20:09	127-18-4	
Trichloroethene	ND	ug/kg	5.0	1		04/03/09 20:09	79-01-6	
Vinyl chloride	ND	ug/kg	5.0	1		04/03/09 20:09	75-01-4	
Dibromofluoromethane (S)	93	%	68-129	1		04/03/09 20:09	1868-53-7	
Toluene-d8 (S)	106	%	81-121	1		04/03/09 20:09	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-131	1		04/03/09 20:09	460-00-4	
1,2-Dichloroethane-d4 (S)	84	%	77-131	1		04/03/09 20:09	17060-07-0	

QUALITY CONTROL DATA

Project: CARTER CARBURATOR

Pace Project No.: 6056395

QC Batch: PMST/4018 Analysis Method: ASTM D2974-87
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
 Associated Lab Samples: 6056395001, 6056395002, 6056395003, 6056395004, 6056395005, 6056395006, 6056395007, 6056395008

SAMPLE DUPLICATE: 463816

Parameter	Units	6056412002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.5	6.5	38	20	

QUALITY CONTROL DATA

Project: CARTER CARBURATOR

Pace Project No.: 6056395

QC Batch:	MSV/20384	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	6056395001, 6056395002, 6056395003, 6056395005, 6056395006, 6056395007, 6056395009		

METHOD BLANK: 464943 Matrix: Solid

Associated Lab Samples: 6056395001, 6056395002, 6056395003, 6056395005, 6056395006, 6056395007, 6056395009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Tetrachloroethene	ug/kg	ND	5.0	04/03/09 17:33	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Trichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Vinyl chloride	ug/kg	ND	5.0	04/03/09 17:33	
1,2-Dichloroethane-d4 (S)	%	92	77-131	04/03/09 17:33	
4-Bromofluorobenzene (S)	%	102	75-131	04/03/09 17:33	
Dibromofluoromethane (S)	%	97	68-129	04/03/09 17:33	
Toluene-d8 (S)	%	103	81-121	04/03/09 17:33	

LABORATORY CONTROL SAMPLE: 464944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	45.9	92	79-127	
Tetrachloroethene	ug/kg	50	49.3	99	86-125	
trans-1,2-Dichloroethene	ug/kg	50	46.1	92	77-125	
Trichloroethene	ug/kg	50	48.7	97	86-126	
Vinyl chloride	ug/kg	50	48.2	96	69-153	
1,2-Dichloroethane-d4 (S)	%			95	77-131	
4-Bromofluorobenzene (S)	%			100	75-131	
Dibromofluoromethane (S)	%			98	68-129	
Toluene-d8 (S)	%			105	81-121	

QUALITY CONTROL DATA

Project: CARTER CARBURATOR

Pace Project No.: 6056395

QC Batch: MSV/20430

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 6056395004, 6056395008

METHOD BLANK: 465806

Matrix: Solid

Associated Lab Samples: 6056395004, 6056395008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/06/09 10:10	
Tetrachloroethene	ug/kg	ND	5.0	04/06/09 10:10	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/06/09 10:10	
Trichloroethene	ug/kg	ND	5.0	04/06/09 10:10	
Vinyl chloride	ug/kg	ND	5.0	04/06/09 10:10	
1,2-Dichloroethane-d4 (S)	%	92	77-131	04/06/09 10:10	
4-Bromofluorobenzene (S)	%	102	75-131	04/06/09 10:10	
Dibromofluoromethane (S)	%	98	68-129	04/06/09 10:10	
Toluene-d8 (S)	%	103	81-121	04/06/09 10:10	

LABORATORY CONTROL SAMPLE: 465807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	49.5	99	79-127	
Tetrachloroethene	ug/kg	50	52.1	104	86-125	
trans-1,2-Dichloroethene	ug/kg	50	43.3	87	77-125	
Trichloroethene	ug/kg	50	52.2	104	86-126	
Vinyl chloride	ug/kg	50	39.8	80	69-153	
1,2-Dichloroethane-d4 (S)	%			95	77-131	
4-Bromofluorobenzene (S)	%			102	75-131	
Dibromofluoromethane (S)	%			99	68-129	
Toluene-d8 (S)	%			103	81-121	

QUALIFIERS

Project: CARTER CARBURATOR

Pace Project No.: 6056395

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

ANALYTE QUALIFIERS

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CARTER CARBURATOR

Pace Project No.: 6056395

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6056395001	SS-MW-RR-5-01	ASTM D2974-87	PMST/4018		
6056395002	SS-MW-RR-5-13	ASTM D2974-87	PMST/4018		
6056395003	SS-MW-RR-5-16	ASTM D2974-87	PMST/4018		
6056395004	SS-MW-RR-5-18	ASTM D2974-87	PMST/4018		
6056395005	SS-MW-QQ-15-03	ASTM D2974-87	PMST/4018		
6056395006	SS-MW-QQ-15-10	ASTM D2974-87	PMST/4018		
6056395007	SS-MW-QQ-15-15	ASTM D2974-87	PMST/4018		
6056395008	SS-MW-QQ-15-20	ASTM D2974-87	PMST/4018		
6056395001	SS-MW-RR-5-01	EPA 8260	MSV/20384		
6056395002	SS-MW-RR-5-13	EPA 8260	MSV/20384		
6056395003	SS-MW-RR-5-16	EPA 8260	MSV/20384		
6056395005	SS-MW-QQ-15-03	EPA 8260	MSV/20384		
6056395006	SS-MW-QQ-15-10	EPA 8260	MSV/20384		
6056395007	SS-MW-QQ-15-15	EPA 8260	MSV/20384		
6056395009	TRIP BLANK	EPA 8260	MSV/20384		
6056395004	SS-MW-RR-5-18	EPA 8260	MSV/20430		
6056395008	SS-MW-QQ-15-20	EPA 8260	MSV/20430		

Section A

Section B

Required Client Information:

Required Client Information:

Required Client Information:

Company: MACTEC Address: 3199 Riverport Tech Center Dr St. Louis, MO 63043 Phone: 314-209-5900 Fax: 314-209-5929 Location: (State) MO		Report To: Chris Tedder, MACTEC P. O.: 2009 04618 Project Name: CARBON CARBURETOR Site Address: Project No.: 3250055164.24		Email Results: Chris Tedder, MACTEC Requested Due Date: Quote Reference: Project Manager: Project #: Profile #:		Copy To: Invoice To:		Jack Friesner, MACTEC														
ITEM NUMBER	SAMPLE ID (print clearly)			Matrix ID: Water Tissue Soil Other: Oil Wipe Air	Sample Matrix	Date Collected	Time Collected	# of Containers	Preservatives						Requested Analysis	REMARKS / LAB ID						
									Unpreserved	H2SO4	HN03	HCl	NaOH	TSP or Na2S2O3			Methanol	VOC (8260) 3M				
1	SS-MW-RR-5-01	Soil	Water	3-31-09	1220	6	3	1	1	1	1	1	1	1	1	20644	105-9-1	CLO 56355 PID=871 4/1/09				
2	SS-MW-RR-5-13	Soil	Water	3-31-09	1230	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
3	SS-MW-RR-5-16	Soil	Water	3-31-09	1235	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
4	SS-MW-RR-5-18	Soil	Water	3-31-09	1240	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
5	SS-MW-QQ-15-03	Soil	Water	3-31-09	1415	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
6	SS-MW-QQ-15-10	Soil	Water	3-31-09	1420	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
7	SS-MW-QQ-15-15	Soil	Water	3-31-09	1425	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
8	SS-MW-QQ-15-20	Soil	Water	3-31-09	1435	6	3	1	1	1	1	1	1	1	1	20644	105-9-1					
9	TRIP BLANK	OT	Water	3-31-09	-	20	20															
10			Water																			
11			Water																			
12			Water																			
SHIPMENT METHOD		AIRBILL NO.		SHIPPING DATE		NO. OF COOLERS		ITEM#		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		
RACUR				3-31-09		1				JACK FRIESNER		3/31/09		1620		JACK FRIESNER		3/31/09		1620		
SAMPLE CONDITION: Temp in C 0.4 Received on ice 0 / N Sealed Cooler 0 / N Sample Intact 0 / N																						
SAMPLE NOTES: 3/31/09 1700 Jack Friesner 4/1/09 09145																						
SIGNATURE OF SAMPLER: JACK FRIESNER DATE SIGNED: 3-31-09																						



Sample Condition Upon Receipt

Client Name: Mattco

Project # 6056395

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other JLS

Tracking #: 5493142

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Optional
Proj. Due Date
Proj. Name

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other Frame

Thermometer Used T-142 T-168

Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.4°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/1/09 AK

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>SL</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>AK</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>021609-3 2 vials</u>		

Client Notification/ Resolution:

Copy COC to Client?

☒ Y ☐ N

Field Data Required?

☐ Y ☐ N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Shaw

Date: 4.1.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

April 09, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: CARTER CARBURETOR
Pace Project No.: 6056469

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

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SAMPLE SUMMARY

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6056469001	SS-MW-C-1-03	Solid	04/01/09 10:25	04/02/09 09:15
6056469002	SS-MW-C-1-09	Solid	04/01/09 10:35	04/02/09 09:15
6056469003	SS-MW-C-1-14	Solid	04/01/09 10:45	04/02/09 09:15
6056469004	SS-MW-C-1-26.5	Solid	04/01/09 10:55	04/02/09 09:15
6056469005	SS-MW-H-1-03	Solid	04/01/09 12:25	04/02/09 09:15
6056469006	SS-MW-H-1-09	Solid	04/01/09 12:30	04/02/09 09:15
6056469007	SS-MW-H-1-13	Solid	04/01/09 12:35	04/02/09 09:15
6056469008	SS-MW-H-1-27	Solid	04/01/09 12:50	04/02/09 09:15
6056469009	SS-MW-H-1-03 DUP	Solid	04/01/09 12:25	04/02/09 09:15
6056469010	SS-MW-H-1-09 DUP	Solid	04/01/09 12:30	04/02/09 09:15
6056469011	SS-MW-H-1-13 DUP	Solid	04/01/09 12:35	04/02/09 09:15
6056469012	SS-MW-H-1-27 DUP	Solid	04/01/09 12:50	04/02/09 09:15
6056469013	SS-MW-KK-15-03	Solid	04/01/09 14:05	04/02/09 09:15
6056469014	SS-MW-KK-15-17	Solid	04/01/09 14:20	04/02/09 09:15
6056469015	SS-MW-KK-15-20	Solid	04/01/09 14:25	04/02/09 09:15
6056469016	TRIP BLANK	Solid	04/01/09 00:00	04/02/09 09:15

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SAMPLE ANALYTE COUNT

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
6056469001	SS-MW-C-1-03	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469002	SS-MW-C-1-09	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469003	SS-MW-C-1-14	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469004	SS-MW-C-1-26.5	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469005	SS-MW-H-1-03	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469006	SS-MW-H-1-09	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469007	SS-MW-H-1-13	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469008	SS-MW-H-1-27	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469009	SS-MW-H-1-03 DUP	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469010	SS-MW-H-1-09 DUP	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469011	SS-MW-H-1-13 DUP	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469012	SS-MW-H-1-27 DUP	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469013	SS-MW-KK-15-03	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469014	SS-MW-KK-15-17	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469015	SS-MW-KK-15-20	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056469016	TRIP BLANK	ASTM D2974-87	TM	1	PASI-K
		EPA 8260	BAG	9	PASI-K

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Method: EPA 8260

Description: 8260 MSV 5035A VOA

Client: Mactec

Date: April 09, 2009

General Information:

16 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/20426

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- SS-MW-KK-15-17 (Lab ID: 6056469014)
 - 1,2-Dichloroethane-d4 (S)
 - 4-Bromofluorobenzene (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/20426

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/20443

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Method: ASTM D2974-87

Description: Percent Moisture

Client: Mactec

Date: April 09, 2009

General Information:

16 samples were analyzed for ASTM D2974-87. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-C-1-03** Lab ID: **6056469001** Collected: 04/01/09 10:25 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/03/09 20:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/03/09 20:26	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/03/09 20:26	127-18-4	
Trichloroethene	ND	ug/kg	5.2	1		04/03/09 20:26	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/03/09 20:26	75-01-4	
Dibromofluoromethane (S)	93	%	68-129	1		04/03/09 20:26	1868-53-7	
Toluene-d8 (S)	104	%	81-121	1		04/03/09 20:26	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131	1		04/03/09 20:26	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	77-131	1		04/03/09 20:26	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	23.1	%	0.10	1		04/03/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-C-1-09 **Lab ID:** 6056469002 Collected: 04/01/09 10:35 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		04/03/09 20:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		04/03/09 20:44	156-60-5	
Tetrachloroethene	18.9	ug/kg	5.8	1		04/03/09 20:44	127-18-4	
Trichloroethene	26.2	ug/kg	5.8	1		04/03/09 20:44	79-01-6	
Vinyl chloride	ND	ug/kg	5.8	1		04/03/09 20:44	75-01-4	
Dibromofluoromethane (S)	96	%	68-129	1		04/03/09 20:44	1868-53-7	
Toluene-d8 (S)	103	%	81-121	1		04/03/09 20:44	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131	1		04/03/09 20:44	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	77-131	1		04/03/09 20:44	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.1	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-C-1-14 **Lab ID:** 6056469003 Collected: 04/01/09 10:45 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	4.8	1		04/03/09 21:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.8	1		04/03/09 21:01	156-60-5	
Tetrachloroethene	13.5	ug/kg	4.8	1		04/03/09 21:01	127-18-4	
Trichloroethene	23.6	ug/kg	4.8	1		04/03/09 21:01	79-01-6	
Vinyl chloride	ND	ug/kg	4.8	1		04/03/09 21:01	75-01-4	
Dibromofluoromethane (S)	96	%	68-129	1		04/03/09 21:01	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/03/09 21:01	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-131	1		04/03/09 21:01	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	77-131	1		04/03/09 21:01	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.7	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-C-1-26.5** Lab ID: **6056469004** Collected: 04/01/09 10:55 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	7.4	1		04/07/09 17:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.4	1		04/07/09 17:31	156-60-5	
Tetrachloroethene	ND	ug/kg	7.4	1		04/07/09 17:31	127-18-4	
Trichloroethene	ND	ug/kg	7.4	1		04/07/09 17:31	79-01-6	
Vinyl chloride	ND	ug/kg	7.4	1		04/07/09 17:31	75-01-4	
Dibromofluoromethane (S)	102	%	68-129	1		04/07/09 17:31	1868-53-7	
Toluene-d8 (S)	97	%	81-121	1		04/07/09 17:31	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/07/09 17:31	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	77-131	1		04/07/09 17:31	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.6	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-H-1-03 **Lab ID:** 6056469005 Collected: 04/01/09 12:25 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	6.7	1		04/07/09 17:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.7	1		04/07/09 17:48	156-60-5	
Tetrachloroethene	ND	ug/kg	6.7	1		04/07/09 17:48	127-18-4	
Trichloroethene	ND	ug/kg	6.7	1		04/07/09 17:48	79-01-6	
Vinyl chloride	ND	ug/kg	6.7	1		04/07/09 17:48	75-01-4	
Dibromofluoromethane (S)	101	%	68-129	1		04/07/09 17:48	1868-53-7	
Toluene-d8 (S)	98	%	81-121	1		04/07/09 17:48	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-131	1		04/07/09 17:48	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	77-131	1		04/07/09 17:48	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	33.2	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-H-1-09** Lab ID: **6056469006** Collected: 04/01/09 12:30 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1		04/07/09 18:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		04/07/09 18:06	156-60-5	
Tetrachloroethene	ND	ug/kg	5.3	1		04/07/09 18:06	127-18-4	
Trichloroethene	ND	ug/kg	5.3	1		04/07/09 18:06	79-01-6	
Vinyl chloride	ND	ug/kg	5.3	1		04/07/09 18:06	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/07/09 18:06	1868-53-7	
Toluene-d8 (S)	97	%	81-121	1		04/07/09 18:06	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/07/09 18:06	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	77-131	1		04/07/09 18:06	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.7	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-H-1-13** Lab ID: **6056469007** Collected: 04/01/09 12:35 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	7.3	1		04/07/09 18:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.3	1		04/07/09 18:23	156-60-5	
Tetrachloroethene	ND	ug/kg	7.3	1		04/07/09 18:23	127-18-4	
Trichloroethene	ND	ug/kg	7.3	1		04/07/09 18:23	79-01-6	
Vinyl chloride	ND	ug/kg	7.3	1		04/07/09 18:23	75-01-4	
Dibromofluoromethane (S)	104	%	68-129	1		04/07/09 18:23	1868-53-7	
Toluene-d8 (S)	98	%	81-121	1		04/07/09 18:23	2037-26-5	
4-Bromofluorobenzene (S)	107	%	75-131	1		04/07/09 18:23	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131	1		04/07/09 18:23	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	24.5	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-H-1-27 **Lab ID:** 6056469008 Collected: 04/01/09 12:50 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/07/09 18:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/07/09 18:41	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/07/09 18:41	127-18-4	
Trichloroethene	ND	ug/kg	5.2	1		04/07/09 18:41	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/07/09 18:41	75-01-4	
Dibromofluoromethane (S)	104	%	68-129	1		04/07/09 18:41	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/07/09 18:41	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-131	1		04/07/09 18:41	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	77-131	1		04/07/09 18:41	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.9	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-H-1-03 DUP** Lab ID: **6056469009** Collected: 04/01/09 12:25 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	7.4	1		04/07/09 18:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.4	1		04/07/09 18:58	156-60-5	
Tetrachloroethene	ND	ug/kg	7.4	1		04/07/09 18:58	127-18-4	
Trichloroethene	ND	ug/kg	7.4	1		04/07/09 18:58	79-01-6	
Vinyl chloride	ND	ug/kg	7.4	1		04/07/09 18:58	75-01-4	
Dibromofluoromethane (S)	102	%	68-129	1		04/07/09 18:58	1868-53-7	
Toluene-d8 (S)	97	%	81-121	1		04/07/09 18:58	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/07/09 18:58	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	77-131	1		04/07/09 18:58	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	31.9	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-H-1-09 DUP **Lab ID:** 6056469010 Collected: 04/01/09 12:30 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/07/09 19:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/07/09 19:15	156-60-5	
Tetrachloroethene	ND	ug/kg	5.4	1		04/07/09 19:15	127-18-4	
Trichloroethene	ND	ug/kg	5.4	1		04/07/09 19:15	79-01-6	
Vinyl chloride	ND	ug/kg	5.4	1		04/07/09 19:15	75-01-4	
Dibromofluoromethane (S)	99 %		68-129	1		04/07/09 19:15	1868-53-7	
Toluene-d8 (S)	97 %		81-121	1		04/07/09 19:15	2037-26-5	
4-Bromofluorobenzene (S)	104 %		75-131	1		04/07/09 19:15	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		77-131	1		04/07/09 19:15	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.7 %		0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-H-1-13 DUP** Lab ID: **6056469011** Collected: 04/01/09 12:35 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	7.2	1		04/07/09 19:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.2	1		04/07/09 19:33	156-60-5	
Tetrachloroethene	ND	ug/kg	7.2	1		04/07/09 19:33	127-18-4	
Trichloroethene	ND	ug/kg	7.2	1		04/07/09 19:33	79-01-6	
Vinyl chloride	ND	ug/kg	7.2	1		04/07/09 19:33	75-01-4	
Dibromofluoromethane (S)	105	%	68-129	1		04/07/09 19:33	1868-53-7	
Toluene-d8 (S)	99	%	81-121	1		04/07/09 19:33	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/07/09 19:33	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	77-131	1		04/07/09 19:33	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	24.5	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-H-1-27 DUP** Lab ID: **6056469012** Collected: 04/01/09 12:50 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1		04/07/09 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		04/07/09 19:50	156-60-5	
Tetrachloroethene	ND	ug/kg	5.3	1		04/07/09 19:50	127-18-4	
Trichloroethene	ND	ug/kg	5.3	1		04/07/09 19:50	79-01-6	
Vinyl chloride	ND	ug/kg	5.3	1		04/07/09 19:50	75-01-4	
Dibromofluoromethane (S)	102	%	68-129	1		04/07/09 19:50	1868-53-7	
Toluene-d8 (S)	98	%	81-121	1		04/07/09 19:50	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/07/09 19:50	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	77-131	1		04/07/09 19:50	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.0	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-KK-15-03** Lab ID: **6056469013** Collected: 04/01/09 14:05 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/07/09 20:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/07/09 20:07	156-60-5	
Tetrachloroethene	ND	ug/kg	5.0	1		04/07/09 20:07	127-18-4	
Trichloroethene	ND	ug/kg	5.0	1		04/07/09 20:07	79-01-6	
Vinyl chloride	ND	ug/kg	5.0	1		04/07/09 20:07	75-01-4	
Dibromofluoromethane (S)	101	%	68-129	1		04/07/09 20:07	1868-53-7	
Toluene-d8 (S)	97	%	81-121	1		04/07/09 20:07	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/07/09 20:07	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	77-131	1		04/07/09 20:07	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	19.3	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: **SS-MW-KK-15-17** Lab ID: **6056469014** Collected: 04/01/09 14:20 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/07/09 20:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/07/09 20:25	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/07/09 20:25	127-18-4	
Trichloroethene	ND	ug/kg	5.2	1		04/07/09 20:25	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/07/09 20:25	75-01-4	
Dibromofluoromethane (S)	74	%	68-129	1		04/07/09 20:25	1868-53-7	
Toluene-d8 (S)	87	%	81-121	1		04/07/09 20:25	2037-26-5	
4-Bromofluorobenzene (S)	957	%	75-131	1		04/07/09 20:25	460-00-4	S2
1,2-Dichloroethane-d4 (S)	52	%	77-131	1		04/07/09 20:25	17060-07-0	S2

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	20.4 %	0.10	1	04/03/09 00:00
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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: SS-MW-KK-15-20 **Lab ID:** 6056469015 Collected: 04/01/09 14:25 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/08/09 14:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/08/09 14:53	156-60-5	
Tetrachloroethene	ND	ug/kg	5.4	1		04/08/09 14:53	127-18-4	
Trichloroethene	ND	ug/kg	5.4	1		04/08/09 14:53	79-01-6	
Vinyl chloride	ND	ug/kg	5.4	1		04/08/09 14:53	75-01-4	
Dibromofluoromethane (S)	89	%	68-129	1		04/08/09 14:53	1868-53-7	
Toluene-d8 (S)	97	%	81-121	1		04/08/09 14:53	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-131	1		04/08/09 14:53	460-00-4	
1,2-Dichloroethane-d4 (S)	78	%	77-131	1		04/08/09 14:53	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.8	%	0.10	1		04/03/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Sample: TRIP BLANK **Lab ID: 6056469016** Collected: 04/01/09 00:00 Received: 04/02/09 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/07/09 20:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/07/09 20:59	156-60-5	
Tetrachloroethene	ND	ug/kg	5.0	1		04/07/09 20:59	127-18-4	
Trichloroethene	ND	ug/kg	5.0	1		04/07/09 20:59	79-01-6	
Vinyl chloride	ND	ug/kg	5.0	1		04/07/09 20:59	75-01-4	
Dibromofluoromethane (S)	102	%	68-129	1		04/07/09 20:59	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		04/07/09 20:59	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/07/09 20:59	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131	1		04/07/09 20:59	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	ND	%	0.10	1		04/03/09 00:00		

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056469

QC Batch:	PMST/4021	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	6056469001, 6056469002, 6056469003, 6056469004, 6056469005, 6056469006, 6056469007, 6056469008, 6056469009, 6056469010, 6056469011, 6056469012, 6056469013, 6056469014, 6056469015, 6056469016		

SAMPLE DUPLICATE: 464513

Parameter	Units	6056387011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.4	19.4	0	20	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056469

QC Batch: MSV/20384

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 6056469001, 6056469002, 6056469003

METHOD BLANK: 464943

Matrix: Solid

Associated Lab Samples: 6056469001, 6056469002, 6056469003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Tetrachloroethene	ug/kg	ND	5.0	04/03/09 17:33	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Trichloroethene	ug/kg	ND	5.0	04/03/09 17:33	
Vinyl chloride	ug/kg	ND	5.0	04/03/09 17:33	
1,2-Dichloroethane-d4 (S)	%	92	77-131	04/03/09 17:33	
4-Bromofluorobenzene (S)	%	102	75-131	04/03/09 17:33	
Dibromofluoromethane (S)	%	97	68-129	04/03/09 17:33	
Toluene-d8 (S)	%	103	81-121	04/03/09 17:33	

LABORATORY CONTROL SAMPLE: 464944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	45.9	92	79-127	
Tetrachloroethene	ug/kg	50	49.3	99	86-125	
trans-1,2-Dichloroethene	ug/kg	50	46.1	92	77-125	
Trichloroethene	ug/kg	50	48.7	97	86-126	
Vinyl chloride	ug/kg	50	48.2	96	69-153	
1,2-Dichloroethane-d4 (S)	%			95	77-131	
4-Bromofluorobenzene (S)	%			100	75-131	
Dibromofluoromethane (S)	%			98	68-129	
Toluene-d8 (S)	%			105	81-121	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056469

QC Batch: MSV/20426 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 6056469004, 6056469005, 6056469006, 6056469007, 6056469008, 6056469009, 6056469010, 6056469011, 6056469012, 6056469013, 6056469014, 6056469016

METHOD BLANK: 465597

Matrix: Solid

Associated Lab Samples: 6056469004, 6056469005, 6056469006, 6056469007, 6056469008, 6056469009, 6056469010, 6056469011, 6056469012, 6056469013, 6056469014, 6056469016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	4.9	04/07/09 15:29	
Tetrachloroethene	ug/kg	ND	4.9	04/07/09 15:29	
trans-1,2-Dichloroethene	ug/kg	ND	4.9	04/07/09 15:29	
Trichloroethene	ug/kg	ND	4.9	04/07/09 15:29	
Vinyl chloride	ug/kg	ND	4.9	04/07/09 15:29	
1,2-Dichloroethane-d4 (S)	%	107	77-131	04/07/09 15:29	
4-Bromofluorobenzene (S)	%	105	75-131	04/07/09 15:29	
Dibromofluoromethane (S)	%	102	68-129	04/07/09 15:29	
Toluene-d8 (S)	%	100	81-121	04/07/09 15:29	

LABORATORY CONTROL SAMPLE: 465598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	54.8	110	79-127	
Tetrachloroethene	ug/kg	50	48.5	97	86-125	
trans-1,2-Dichloroethene	ug/kg	50	50.1	100	77-125	
Trichloroethene	ug/kg	50	54.9	110	86-126	
Vinyl chloride	ug/kg	50	50.7	101	69-153	
1,2-Dichloroethane-d4 (S)	%			105	77-131	
4-Bromofluorobenzene (S)	%			101	75-131	
Dibromofluoromethane (S)	%			102	68-129	
Toluene-d8 (S)	%			99	81-121	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056469

QC Batch: MSV/20443

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 6056469015

METHOD BLANK: 466170

Matrix: Solid

Associated Lab Samples: 6056469015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	4.9	04/08/09 10:55	
Tetrachloroethene	ug/kg	ND	4.9	04/08/09 10:55	
trans-1,2-Dichloroethene	ug/kg	ND	4.9	04/08/09 10:55	
Trichloroethene	ug/kg	ND	4.9	04/08/09 10:55	
Vinyl chloride	ug/kg	ND	4.9	04/08/09 10:55	
1,2-Dichloroethane-d4 (S)	%	107	77-131	04/08/09 10:55	
4-Bromofluorobenzene (S)	%	103	75-131	04/08/09 10:55	
Dibromofluoromethane (S)	%	102	68-129	04/08/09 10:55	
Toluene-d8 (S)	%	100	81-121	04/08/09 10:55	

LABORATORY CONTROL SAMPLE: 466171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	56.0	112	79-127	
Tetrachloroethene	ug/kg	50	49.2	98	86-125	
trans-1,2-Dichloroethene	ug/kg	50	54.8	110	77-125	
Trichloroethene	ug/kg	50	54.1	108	86-126	
Vinyl chloride	ug/kg	50	54.5	109	69-153	
1,2-Dichloroethane-d4 (S)	%			102	77-131	
4-Bromofluorobenzene (S)	%			101	75-131	
Dibromofluoromethane (S)	%			101	68-129	
Toluene-d8 (S)	%			101	81-121	

QUALIFIERS

Project: CARTER CARBURETOR

Pace Project No.: 6056469

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: MSV/20426

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/20443

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CARTER CARBURETOR

Pace Project No.: 6056469

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6056469001	SS-MW-C-1-03	ASTM D2974-87	PMST/4021		
6056469002	SS-MW-C-1-09	ASTM D2974-87	PMST/4021		
6056469003	SS-MW-C-1-14	ASTM D2974-87	PMST/4021		
6056469004	SS-MW-C-1-26.5	ASTM D2974-87	PMST/4021		
6056469005	SS-MW-H-1-03	ASTM D2974-87	PMST/4021		
6056469006	SS-MW-H-1-09	ASTM D2974-87	PMST/4021		
6056469007	SS-MW-H-1-13	ASTM D2974-87	PMST/4021		
6056469008	SS-MW-H-1-27	ASTM D2974-87	PMST/4021		
6056469009	SS-MW-H-1-03 DUP	ASTM D2974-87	PMST/4021		
6056469010	SS-MW-H-1-09 DUP	ASTM D2974-87	PMST/4021		
6056469011	SS-MW-H-1-13 DUP	ASTM D2974-87	PMST/4021		
6056469012	SS-MW-H-1-27 DUP	ASTM D2974-87	PMST/4021		
6056469013	SS-MW-KK-15-03	ASTM D2974-87	PMST/4021		
6056469014	SS-MW-KK-15-17	ASTM D2974-87	PMST/4021		
6056469015	SS-MW-KK-15-20	ASTM D2974-87	PMST/4021		
6056469016	TRIP BLANK	ASTM D2974-87	PMST/4021		
6056469001	SS-MW-C-1-03	EPA 8260	MSV/20384		
6056469002	SS-MW-C-1-09	EPA 8260	MSV/20384		
6056469003	SS-MW-C-1-14	EPA 8260	MSV/20384		
6056469004	SS-MW-C-1-26.5	EPA 8260	MSV/20426		
6056469005	SS-MW-H-1-03	EPA 8260	MSV/20426		
6056469006	SS-MW-H-1-09	EPA 8260	MSV/20426		
6056469007	SS-MW-H-1-13	EPA 8260	MSV/20426		
6056469008	SS-MW-H-1-27	EPA 8260	MSV/20426		
6056469009	SS-MW-H-1-03 DUP	EPA 8260	MSV/20426		
6056469010	SS-MW-H-1-09 DUP	EPA 8260	MSV/20426		
6056469011	SS-MW-H-1-13 DUP	EPA 8260	MSV/20426		
6056469012	SS-MW-H-1-27 DUP	EPA 8260	MSV/20426		
6056469013	SS-MW-KK-15-03	EPA 8260	MSV/20426		
6056469014	SS-MW-KK-15-17	EPA 8260	MSV/20426		
6056469016	TRIP BLANK	EPA 8260	MSV/20426		
6056469015	SS-MW-KK-15-20	EPA 8260	MSV/20443		

Required Client Information: Section A				Required Client Information: Section B				Required Client Information:									
Company:	MACTEC	Report To:	Chris Tedder, MACTEC	Email Results:	Chris Tedder, MACTEC	Jack Friesner, MACTEC											
Address:	3199 Riverport Tech Center Dr St. Louis, MO 63043	P. O.:	200904618	Requested Due Date:		Copy To:											
Phone:	314-209-5900	Project Name:	ALBERTA BUREAU	Quote Reference:		Invoice To:											
Fax:	314-209-5929	Site Address:		Project Manager:													
Location: (State)	MO	Project No.:	3250055164.21	Project #:													
Required Client Information:		Matrix ID:		Sample Matrix		Date Collected		Time Collected		# of Containers		Preservatives		Requested Analysis		REMARKS / LAB ID	
SAMPLE ID (print clearly)		Water	Tissue	Soil	Other:	Unpreserved	H2SO4	HNO3	HCl	NaOH	TSP or Na2S2O3	Methanol	VOC (826) (919) (919)				
1	SS-MW-KK-15-03	Water				3					21	21	X	4/1/09	2 (V690)	2 (2490)	013
2	SS-MW-KK-15-17	Water				3					21	21	X	4/1/09	1	1	014
3	SS-MW-KK-15-20	Water				3					21	21	X	4/1/09	1	1	015
4	TRIP BLANK	Water				2							X	4/1/09	1	1	016
5		Water															
6		Water															
7		Water															
8		Water															
9		Water															
10		Water															
11		Water															
12		Water															
SHIPMENT METHOD		AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM#	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME					
Pac-up			4-1-09	1		JACK FRIESNER (WPD)		4/1/09	1630	JACK FRIESNER (WPD)		4/1/09					
SAMPLE CONDITION:		SAMPLE NOTES:															
Temp in C	1.8																
Received on ice	Y/N																
Sealed Cooler	Y/N																
Sample Intact	Y/N																
Additional Comments:																	
SIGNATURE OF SAMPLER: JACK E. FRIESNER DATE SIGNED: 4-1-09																	



Sample Condition Upon Receipt

Client Name: MACTEC

Project # 6056469

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other JSL

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Optional
Proj. Due Date
Proj. Name

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other FOAM

Thermometer Used T-142 T-168

Type of Ice: ☒ Wet ☐ Blue ☐ None

☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: BW 4/2

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>KITS</u>
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>SL</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>021609</u>		

Client Notification/ Resolution:

Copy COC to Client? ☒ Y / N

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: 4.2.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

April 09, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: CARTER CARBURETOR
Pace Project No.: 6056551

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6056551001	SS-MW-Q-9-03	Solid	04/02/09 09:20	04/03/09 09:07
6056551002	SS-MW-Q-9-08	Solid	04/02/09 09:25	04/03/09 09:07
6056551003	SS-MW-PP-10-01	Solid	04/02/09 11:00	04/03/09 09:07
6056551004	SS-MW-PP-10-17	Solid	04/02/09 11:10	04/03/09 09:07
6056551005	SS-MW-PP-10-20	Solid	04/02/09 11:15	04/03/09 09:07
6056551006	SS-MW-FF-4-01	Solid	04/02/09 14:00	04/03/09 09:07
6056551007	SS-MW-FF-4-13	Solid	04/02/09 14:10	04/03/09 09:07
6056551008	SS-MW-FF-4-30	Solid	04/02/09 14:25	04/03/09 09:07
6056551009	SS-MW-AA-6-02	Solid	04/02/09 14:50	04/03/09 09:07
6056551010	SS-MW-AA-6-18	Solid	04/02/09 15:00	04/03/09 09:07
6056551011	TRIP BLANK	Solid	04/02/09 00:00	04/03/09 09:07

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
6056551001	SS-MW-Q-9-03	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551002	SS-MW-Q-9-08	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551003	SS-MW-PP-10-01	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551004	SS-MW-PP-10-17	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551005	SS-MW-PP-10-20	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551006	SS-MW-FF-4-01	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551007	SS-MW-FF-4-13	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551008	SS-MW-FF-4-30	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551009	SS-MW-AA-6-02	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551010	SS-MW-AA-6-18	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K
6056551011	TRIP BLANK	ASTM D2974-87	EJD	1	PASI-K
		EPA 8260	BAG	9	PASI-K

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Method: EPA 8260

Description: 8260 MSV 5035A VOA

Client: Mactec

Date: April 09, 2009

General Information:

11 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/20439

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Method: ASTM D2974-87

Description: Percent Moisture

Client: Mactec

Date: April 09, 2009

General Information:

11 samples were analyzed for ASTM D2974-87. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

The matrix contained rocks. Rocks were found in both the DUP and the parent sample, which made the percent moisture numbers vary from each other.

- DUP (Lab ID: 465417)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: SS-MW-Q-9-03 **Lab ID: 6056551001** Collected: 04/02/09 09:20 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/07/09 23:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1		04/07/09 23:49	156-60-5	
Tetrachloroethene	ND	ug/kg	5.4	1		04/07/09 23:49	127-18-4	
Trichloroethene	ND	ug/kg	5.4	1		04/07/09 23:49	79-01-6	
Vinyl chloride	ND	ug/kg	5.4	1		04/07/09 23:49	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/07/09 23:49	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/07/09 23:49	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-131	1		04/07/09 23:49	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	77-131	1		04/07/09 23:49	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.1	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: SS-MW-Q-9-08 **Lab ID: 6056551002** Collected: 04/02/09 09:25 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	6.5	1		04/08/09 00:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.5	1		04/08/09 00:06	156-60-5	
Tetrachloroethene	ND	ug/kg	6.5	1		04/08/09 00:06	127-18-4	
Trichloroethene	ND	ug/kg	6.5	1		04/08/09 00:06	79-01-6	
Vinyl chloride	ND	ug/kg	6.5	1		04/08/09 00:06	75-01-4	
Dibromofluoromethane (S)	101	%	68-129	1		04/08/09 00:06	1868-53-7	
Toluene-d8 (S)	99	%	81-121	1		04/08/09 00:06	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/08/09 00:06	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	77-131	1		04/08/09 00:06	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.7	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-PP-10-01** Lab ID: **6056551003** Collected: 04/02/09 11:00 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	9.6	ug/kg	5.2	1		04/08/09 00:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	1		04/08/09 00:23	156-60-5	
Tetrachloroethene	ND	ug/kg	5.2	1		04/08/09 00:23	127-18-4	
Trichloroethene	53.8	ug/kg	5.2	1		04/08/09 00:23	79-01-6	
Vinyl chloride	ND	ug/kg	5.2	1		04/08/09 00:23	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/08/09 00:23	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		04/08/09 00:23	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/08/09 00:23	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	77-131	1		04/08/09 00:23	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	19.6	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-PP-10-17** Lab ID: **6056551004** Collected: 04/02/09 11:10 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	42.7	ug/kg	5.3	1		04/08/09 00:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		04/08/09 00:40	156-60-5	
Tetrachloroethene	ND	ug/kg	5.3	1		04/08/09 00:40	127-18-4	
Trichloroethene	67.4	ug/kg	5.3	1		04/08/09 00:40	79-01-6	
Vinyl chloride	ND	ug/kg	5.3	1		04/08/09 00:40	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/08/09 00:40	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/08/09 00:40	2037-26-5	
4-Bromofluorobenzene (S)	107	%	75-131	1		04/08/09 00:40	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	77-131	1		04/08/09 00:40	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.0	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-PP-10-20** Lab ID: **6056551005** Collected: 04/02/09 11:15 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	126	ug/kg	6.4	1		04/08/09 00:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.4	1		04/08/09 00:57	156-60-5	
Tetrachloroethene	ND	ug/kg	6.4	1		04/08/09 00:57	127-18-4	
Trichloroethene	236	ug/kg	6.4	1		04/08/09 00:57	79-01-6	
Vinyl chloride	ND	ug/kg	6.4	1		04/08/09 00:57	75-01-4	
Dibromofluoromethane (S)	101	%	68-129	1		04/08/09 00:57	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		04/08/09 00:57	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-131	1		04/08/09 00:57	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	77-131	1		04/08/09 00:57	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.7	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-FF-4-01** Lab ID: **6056551006** Collected: 04/02/09 14:00 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	7990	ug/kg	1590	200		04/08/09 15:44	156-59-2	
trans-1,2-Dichloroethene	34.5	ug/kg	7.6	1		04/08/09 01:14	156-60-5	
Tetrachloroethene	ND	ug/kg	7.6	1		04/08/09 01:14	127-18-4	
Trichloroethene	55700	ug/kg	1590	200		04/08/09 15:44	79-01-6	
Vinyl chloride	ND	ug/kg	7.6	1		04/08/09 01:14	75-01-4	
Dibromofluoromethane (S)	88	%	68-129	1		04/08/09 01:14	1868-53-7	
Toluene-d8 (S)	92	%	81-121	1		04/08/09 01:14	2037-26-5	
4-Bromofluorobenzene (S)	91	%	75-131	1		04/08/09 01:14	460-00-4	
1,2-Dichloroethane-d4 (S)	81	%	77-131	1		04/08/09 01:14	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.3	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-FF-4-13** Lab ID: **6056551007** Collected: 04/02/09 14:10 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	34.8	ug/kg	6.9	1		04/08/09 01:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.9	1		04/08/09 01:31	156-60-5	
Tetrachloroethene	ND	ug/kg	6.9	1		04/08/09 01:31	127-18-4	
Trichloroethene	108	ug/kg	6.9	1		04/08/09 01:31	79-01-6	
Vinyl chloride	ND	ug/kg	6.9	1		04/08/09 01:31	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/08/09 01:31	1868-53-7	
Toluene-d8 (S)	99	%	81-121	1		04/08/09 01:31	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/08/09 01:31	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	77-131	1		04/08/09 01:31	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.2	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: SS-MW-FF-4-30 **Lab ID:** 6056551008 Collected: 04/02/09 14:25 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.1	1		04/08/09 01:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.1	1		04/08/09 01:48	156-60-5	
Tetrachloroethene	ND	ug/kg	5.1	1		04/08/09 01:48	127-18-4	
Trichloroethene	ND	ug/kg	5.1	1		04/08/09 01:48	79-01-6	
Vinyl chloride	ND	ug/kg	5.1	1		04/08/09 01:48	75-01-4	
Dibromofluoromethane (S)	102	%	68-129	1		04/08/09 01:48	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/08/09 01:48	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-131	1		04/08/09 01:48	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	77-131	1		04/08/09 01:48	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.4	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: **SS-MW-AA-6-02** Lab ID: **6056551009** Collected: 04/02/09 14:50 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.6	1		04/08/09 02:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.6	1		04/08/09 02:05	156-60-5	
Tetrachloroethene	ND	ug/kg	5.6	1		04/08/09 02:05	127-18-4	
Trichloroethene	180	ug/kg	5.6	1		04/08/09 02:05	79-01-6	
Vinyl chloride	ND	ug/kg	5.6	1		04/08/09 02:05	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/08/09 02:05	1868-53-7	
Toluene-d8 (S)	98	%	81-121	1		04/08/09 02:05	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/08/09 02:05	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	77-131	1		04/08/09 02:05	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	16.1	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: SS-MW-AA-6-18 **Lab ID:** 6056551010 Collected: 04/02/09 15:00 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	152	ug/kg	5.0	1		04/08/09 02:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/08/09 02:22	156-60-5	
Tetrachloroethene	ND	ug/kg	5.0	1		04/08/09 02:22	127-18-4	
Trichloroethene	262	ug/kg	5.0	1		04/08/09 02:22	79-01-6	
Vinyl chloride	24.1	ug/kg	5.0	1		04/08/09 02:22	75-01-4	
Dibromofluoromethane (S)	101	%	68-129	1		04/08/09 02:22	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		04/08/09 02:22	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/08/09 02:22	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	77-131	1		04/08/09 02:22	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.9	%	0.10	1		04/06/09 00:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Sample: TRIP BLANK Lab ID: 6056551011 Collected: 04/02/09 00:00 Received: 04/03/09 09:07 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/08/09 02:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		04/08/09 02:39	156-60-5	
Tetrachloroethene	ND	ug/kg	5.0	1		04/08/09 02:39	127-18-4	
Trichloroethene	ND	ug/kg	5.0	1		04/08/09 02:39	79-01-6	
Vinyl chloride	ND	ug/kg	5.0	1		04/08/09 02:39	75-01-4	
Dibromofluoromethane (S)	103	%	68-129	1		04/08/09 02:39	1868-53-7	
Toluene-d8 (S)	100	%	81-121	1		04/08/09 02:39	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-131	1		04/08/09 02:39	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	77-131	1		04/08/09 02:39	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	ND	%	0.10	1		04/08/09 00:00		

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056551

QC Batch:	PMST/4027	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	6056551001, 6056551002, 6056551003, 6056551004, 6056551005, 6056551006, 6056551007, 6056551008, 6056551009, 6056551010		

SAMPLE DUPLICATE: 465417

Parameter	Units	6056462039 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.4	6.7	22	20	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056551

QC Batch:	MSV/20439	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	6056551001, 6056551002, 6056551003, 6056551004, 6056551005, 6056551006, 6056551007, 6056551008, 6056551009, 6056551010, 6056551011		

METHOD BLANK: 466018 Matrix: Solid

Associated Lab Samples: 6056551001, 6056551002, 6056551003, 6056551004, 6056551005, 6056551006, 6056551007, 6056551008, 6056551009, 6056551010, 6056551011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/07/09 23:32	
Tetrachloroethene	ug/kg	ND	5.0	04/07/09 23:32	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/07/09 23:32	
Trichloroethene	ug/kg	ND	5.0	04/07/09 23:32	
Vinyl chloride	ug/kg	ND	5.0	04/07/09 23:32	
1,2-Dichloroethane-d4 (S)	%	106	77-131	04/07/09 23:32	
4-Bromofluorobenzene (S)	%	103	75-131	04/07/09 23:32	
Dibromofluoromethane (S)	%	102	68-129	04/07/09 23:32	
Toluene-d8 (S)	%	100	81-121	04/07/09 23:32	

LABORATORY CONTROL SAMPLE: 466019

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	50	54.5	109	79-127	
Tetrachloroethene	ug/kg	50	47.9	96	86-125	
trans-1,2-Dichloroethene	ug/kg	50	49.7	99	77-125	
Trichloroethene	ug/kg	50	55.0	110	86-126	
Vinyl chloride	ug/kg	50	52.2	104	69-153	
1,2-Dichloroethane-d4 (S)	%			105	77-131	
4-Bromofluorobenzene (S)	%			99	75-131	
Dibromofluoromethane (S)	%			102	68-129	
Toluene-d8 (S)	%			100	81-121	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056551

QC Batch: PMST/4036

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 6056551011

SAMPLE DUPLICATE: 466572

Parameter	Units	6056785001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.4	16.8	3	20	

QUALIFIERS

Project: CARTER CARBURETOR

Pace Project No.: 6056551

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

SAMPLE QUALIFIERS

Sample: 465417

[1] The matrix contained rocks. Rocks were found in both the DUP and the parent sample, which made the percent moisture numbers vary from each other.

BATCH QUALIFIERS

Batch: MSV/20439

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CARTER CARBURETOR

Pace Project No.: 6056551

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6056551001	SS-MW-Q-9-03	ASTM D2974-87	PMST/4027		
6056551002	SS-MW-Q-9-08	ASTM D2974-87	PMST/4027		
6056551003	SS-MW-PP-10-01	ASTM D2974-87	PMST/4027		
6056551004	SS-MW-PP-10-17	ASTM D2974-87	PMST/4027		
6056551005	SS-MW-PP-10-20	ASTM D2974-87	PMST/4027		
6056551006	SS-MW-FF-4-01	ASTM D2974-87	PMST/4027		
6056551007	SS-MW-FF-4-13	ASTM D2974-87	PMST/4027		
6056551008	SS-MW-FF-4-30	ASTM D2974-87	PMST/4027		
6056551009	SS-MW-AA-6-02	ASTM D2974-87	PMST/4027		
6056551010	SS-MW-AA-6-18	ASTM D2974-87	PMST/4027		
6056551001	SS-MW-Q-9-03	EPA 8260	MSV/20439		
6056551002	SS-MW-Q-9-08	EPA 8260	MSV/20439		
6056551003	SS-MW-PP-10-01	EPA 8260	MSV/20439		
6056551004	SS-MW-PP-10-17	EPA 8260	MSV/20439		
6056551005	SS-MW-PP-10-20	EPA 8260	MSV/20439		
6056551006	SS-MW-FF-4-01	EPA 8260	MSV/20439		
6056551007	SS-MW-FF-4-13	EPA 8260	MSV/20439		
6056551008	SS-MW-FF-4-30	EPA 8260	MSV/20439		
6056551009	SS-MW-AA-6-02	EPA 8260	MSV/20439		
6056551010	SS-MW-AA-6-18	EPA 8260	MSV/20439		
6056551011	TRIP BLANK	EPA 8260	MSV/20439		
6056551011	TRIP BLANK	ASTM D2974-87	PMST/4036		

Required Client Information: Section A		Required Client Information: Section B	
Company:	MACTEC	Report To:	Chris Tedder, MACTEC
Address:	3199 Riverport Tech Center Dr St. Louis, MO 63043	P. O.:	200904618
Phone:	314-209-5900	Project Name:	CARTON CARBURATOR
Fax:	314-209-5929	Site Address:	
Location: (State)	MO	Project No.:	3250055164.01
Email Results:		Requested Due Date:	
Chris Tedder, MACTEC		Quote Reference:	
Project Manager		Project #	
Profile #		Invoice To:	
Jack Friesner, MACTEC		Copy To:	

Required Client Information:			Matrix ID:		Sample Matrix	Date Collected	Time Collected	# of Containers	Preservatives						Requested Analysis						REMARKS / LAB ID																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
SAMPLE ID (print clearly)			Water	Tissue					Soil	Other:	Unpreserved	H2SO4	HN03	HCl	NaOH	TSP or Na2S2O3	Methanol	VOC (8260) 2x40 ml Vial																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
ITEM NUMBER	SS-MW-Q-9-03	lw624	Soil		4-2-09	0900	6	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	

SHIPMENT METHOD		AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM#	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Pace			4/20/09	1		Chris Tedder, MACTEC	4-20-09	1621	Jack Friesner	4-20-09	1800
SAMPLE NOTES:											
Temp in C: 3.8											
Received on ice: N											
Sealed Cooler: N											
Sample Intact: N											
Additional Comments:											
SAMPLER NAME AND SIGNATURE										DATE SIGNED	
JACK FRIESNER										4-2-09	



Sample Condition Upon Receipt

Client Name: Mader

Project # 6056551

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other JFS

Tracking #: 5506592

4:07

Custody Seal on Cooler/Box Present: ☒ yes ☐ no

Seals intact: ☒ yes ☐ no

Optional
Proj. Due Date
Proj. Name

4/10/09

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other foam

Carter Carburetor

Thermometer Used T-142 T-168

Type of Ice: Wet Blue None ☐

☐ Samples on ice, cooling process has begun

Cooler Temperature 3.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/3/09 DAI

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>SC</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>DAI</u> Lot # of added preservative
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>021609-3 2 V694</u>	<u>1/05</u>

Client Notification/ Resolution:

Copy COC to Client? ☒ Y ☐ N

Field Data Required?

☐ Y ☒ N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: 4.3.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

April 17, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: CARTER CARBURETOR
Pace Project No.: 6056849

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 09, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6056849001	UST-01W	Water	04/08/09 12:50	04/09/09 10:03
6056849002	UST-03W	Water	04/08/09 13:00	04/09/09 10:03
6056849003	UST-04W	Water	04/08/09 14:15	04/09/09 10:03
6056849004	MW-AA-6	Water	04/08/09 14:25	04/09/09 10:03
6056849005	TRIP BLANK	Water	04/08/09 00:00	04/09/09 10:03

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
6056849001	UST-01W	EPA 5030B/8260	PRG	10	PASI-K
6056849002	UST-03W	EPA 5030B/8260	PRG	10	PASI-K
6056849003	UST-04W	EPA 5030B/8260	JTK	10	PASI-K
6056849004	MW-AA-6	EPA 5030B/8260	JTK	10	PASI-K
6056849005	TRIP BLANK	EPA 5030B/8260	PPT	10	PASI-K

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Mactec

Date: April 17, 2009

General Information:

5 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/20530

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/20550

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/20530

1e: Surrogate recovery below control limits due to Sodium Phosphate Tribasic preservative.

- UST-01W (Lab ID: 6056849001)
- Dibromofluoromethane (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Mactec

Date: April 17, 2009

Analyte Comments:

QC Batch: MSV/20530

1e: Surrogate recovery below control limits due to Sodium Phosphate Tribasic preservative.

- UST-03W (Lab ID: 6056849002)
- Dibromofluoromethane (S)

QC Batch: MSV/20550

2e: Surrogate recovery outside QC limits due to preservative.

- TRIP BLANK (Lab ID: 6056849005)
- Dibromofluoromethane (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Sample: UST-01W		Lab ID: 6056849001	Collected: 04/08/09 12:50	Received: 04/09/09 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	1.1 ug/L		1.0	1		04/14/09 20:43	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/14/09 20:43	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/14/09 20:43	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/14/09 20:43	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/14/09 20:43	75-01-4	
4-Bromofluorobenzene (S)	105 %		87-115	1		04/14/09 20:43	460-00-4	
Dibromofluoromethane (S)	73 %		87-113	1		04/14/09 20:43	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	105 %		81-121	1		04/14/09 20:43	17060-07-0	
Toluene-d8 (S)	98 %		89-111	1		04/14/09 20:43	2037-26-5	
Preservation pH	12.0		0.10	1		04/14/09 20:43		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Sample: UST-03W		Lab ID: 6056849002	Collected: 04/08/09 13:00	Received: 04/09/09 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/14/09 21:00	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/14/09 21:00	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/14/09 21:00	127-18-4	
Trichloroethene	1.7 ug/L		1.0	1		04/14/09 21:00	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/14/09 21:00	75-01-4	
4-Bromofluorobenzene (S)	100 %		87-115	1		04/14/09 21:00	460-00-4	
Dibromofluoromethane (S)	66 %		87-113	1		04/14/09 21:00	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	108 %		81-121	1		04/14/09 21:00	17060-07-0	
Toluene-d8 (S)	104 %		89-111	1		04/14/09 21:00	2037-26-5	
Preservation pH	12.0		0.10	1		04/14/09 21:00		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Sample: UST-04W		Lab ID: 6056849003	Collected: 04/08/09 14:15	Received: 04/09/09 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	789	ug/L	10.0	10		04/16/09 14:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	10		04/16/09 14:27	156-60-5	
Tetrachloroethene	ND	ug/L	10.0	10		04/16/09 14:27	127-18-4	
Trichloroethene	41.3	ug/L	10.0	10		04/16/09 14:27	79-01-6	
Vinyl chloride	154	ug/L	10.0	10		04/16/09 14:27	75-01-4	
4-Bromofluorobenzene (S)	111	%	87-115	10		04/16/09 14:27	460-00-4	
Dibromofluoromethane (S)	93	%	87-113	10		04/16/09 14:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	81-121	10		04/16/09 14:27	17060-07-0	
Toluene-d8 (S)	101	%	89-111	10		04/16/09 14:27	2037-26-5	
Preservation pH	12.0		0.10	10		04/16/09 14:27		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Sample: MW-AA-6		Lab ID: 6056849004	Collected: 04/08/09 14:25	Received: 04/09/09 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	478	ug/L	10.0	10		04/16/09 14:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	10		04/16/09 14:41	156-60-5	
Tetrachloroethene	ND	ug/L	10.0	10		04/16/09 14:41	127-18-4	
Trichloroethene	674	ug/L	10.0	10		04/16/09 14:41	79-01-6	
Vinyl chloride	64.9	ug/L	10.0	10		04/16/09 14:41	75-01-4	
4-Bromofluorobenzene (S)	107	%	87-115	10		04/16/09 14:41	460-00-4	
Dibromofluoromethane (S)	93	%	87-113	10		04/16/09 14:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	81-121	10		04/16/09 14:41	17060-07-0	
Toluene-d8 (S)	97	%	89-111	10		04/16/09 14:41	2037-26-5	
Preservation pH	12.0		0.10	10		04/16/09 14:41		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Sample: TRIP BLANK		Lab ID: 6056849005	Collected: 04/08/09 00:00	Received: 04/09/09 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 09:49	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 09:49	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/15/09 09:49	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/15/09 09:49	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/15/09 09:49	75-01-4	
4-Bromofluorobenzene (S)	91 %		87-115	1		04/15/09 09:49	460-00-4	
Dibromofluoromethane (S)	69 %		87-113	1		04/15/09 09:49	1868-53-7	2e
1,2-Dichloroethane-d4 (S)	108 %		81-121	1		04/15/09 09:49	17060-07-0	
Toluene-d8 (S)	103 %		89-111	1		04/15/09 09:49	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 09:49		

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056849

QC Batch: MSV/20530

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 6056849001, 6056849002

METHOD BLANK: 468977

Matrix: Water

Associated Lab Samples: 6056849001, 6056849002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/14/09 12:37	
Tetrachloroethene	ug/L	ND	1.0	04/14/09 12:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/14/09 12:37	
Trichloroethene	ug/L	ND	1.0	04/14/09 12:37	
Vinyl chloride	ug/L	ND	1.0	04/14/09 12:37	
1,2-Dichloroethane-d4 (S)	%	108	81-121	04/14/09 12:37	
4-Bromofluorobenzene (S)	%	103	87-115	04/14/09 12:37	
Dibromofluoromethane (S)	%	103	87-113	04/14/09 12:37	
Toluene-d8 (S)	%	101	89-111	04/14/09 12:37	

LABORATORY CONTROL SAMPLE: 468978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	10	10.6	106	80-119	
Tetrachloroethene	ug/L	10	9.4	94	73-122	
trans-1,2-Dichloroethene	ug/L	10	10.3	103	75-122	
Trichloroethene	ug/L	10	10.1	101	78-119	
Vinyl chloride	ug/L	10	9.7	97	67-139	
1,2-Dichloroethane-d4 (S)	%			108	81-121	
4-Bromofluorobenzene (S)	%			102	87-115	
Dibromofluoromethane (S)	%			105	87-113	
Toluene-d8 (S)	%			102	89-111	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056849

QC Batch: MSV/20550

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 6056849005

METHOD BLANK: 469220

Matrix: Water

Associated Lab Samples: 6056849005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Tetrachloroethene	ug/L	ND	1.0	04/15/09 09:00	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Trichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Vinyl chloride	ug/L	ND	1.0	04/15/09 09:00	
1,2-Dichloroethane-d4 (S)	%	106	81-121	04/15/09 09:00	
4-Bromofluorobenzene (S)	%	91	87-115	04/15/09 09:00	
Dibromofluoromethane (S)	%	103	87-113	04/15/09 09:00	
Toluene-d8 (S)	%	104	89-111	04/15/09 09:00	

LABORATORY CONTROL SAMPLE: 469221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	10	9.3	93	80-119	
Tetrachloroethene	ug/L	10	10.5	105	73-122	
trans-1,2-Dichloroethene	ug/L	10	10.1	101	75-122	
Trichloroethene	ug/L	10	10.3	103	78-119	
Vinyl chloride	ug/L	10	8.8	88	67-139	
1,2-Dichloroethane-d4 (S)	%			99	81-121	
4-Bromofluorobenzene (S)	%			95	87-115	
Dibromofluoromethane (S)	%			102	87-113	
Toluene-d8 (S)	%			102	89-111	

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6056849

QC Batch: MSV/20596

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 6056849003, 6056849004

METHOD BLANK: 470140

Matrix: Water

Associated Lab Samples: 6056849003, 6056849004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/16/09 13:57	
Tetrachloroethene	ug/L	ND	1.0	04/16/09 13:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/16/09 13:57	
Trichloroethene	ug/L	ND	1.0	04/16/09 13:57	
Vinyl chloride	ug/L	ND	1.0	04/16/09 13:57	
1,2-Dichloroethane-d4 (S)	%	98	81-121	04/16/09 13:57	
4-Bromofluorobenzene (S)	%	105	87-115	04/16/09 13:57	
Dibromofluoromethane (S)	%	96	87-113	04/16/09 13:57	
Toluene-d8 (S)	%	100	89-111	04/16/09 13:57	

LABORATORY CONTROL SAMPLE: 470141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	10	9.6	96	80-119	
Tetrachloroethene	ug/L	10	10.2	102	73-122	
trans-1,2-Dichloroethene	ug/L	10	10.2	102	75-122	
Trichloroethene	ug/L	10	9.9	99	78-119	
Vinyl chloride	ug/L	10	10.6	106	67-139	
1,2-Dichloroethane-d4 (S)	%			95	81-121	
4-Bromofluorobenzene (S)	%			103	87-115	
Dibromofluoromethane (S)	%			98	87-113	
Toluene-d8 (S)	%			100	89-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 470142

470143

Parameter	Units	6056717003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	10	10	10.7	10.1	107	101	72-137	5	14	
Tetrachloroethene	ug/L	ND	10	10	10.7	10.4	107	104	65-141	3	18	
trans-1,2-Dichloroethene	ug/L	ND	10	10	11.3	10.9	113	109	70-142	3	15	
Trichloroethene	ug/L	ND	10	10	11.2	10.9	110	108	58-144	2	26	
Vinyl chloride	ug/L	ND	10	10	12.1	11.2	121	112	57-175	8	31	
1,2-Dichloroethane-d4 (S)	%						98	97	81-121			
4-Bromofluorobenzene (S)	%						103	104	87-115			
Dibromofluoromethane (S)	%						99	98	87-113			
Toluene-d8 (S)	%						101	100	89-111			
Preservation pH		1.0			1.0	1.0				0		

QUALIFIERS

Project: CARTER CARBURETOR

Pace Project No.: 6056849

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: MSV/20530

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/20550

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Surrogate recovery below control limits due to Sodium Phosphate Tribasic preservative.

2e Surrogate recovery outside QC limits due to preservative.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CARTER CARBURETOR

Pace Project No.: 6056849

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6056849001	UST-01W	EPA 5030B/8260	MSV/20530		
6056849002	UST-03W	EPA 5030B/8260	MSV/20530		
6056849005	TRIP BLANK	EPA 5030B/8260	MSV/20550		
6056849003	UST-04W	EPA 5030B/8260	MSV/20596		
6056849004	MW-AA-6	EPA 5030B/8260	MSV/20596		

Required Client Information:

Section A

Required Client Information:						Requestor Contact Information						
Company:	MACTEC			Report To:	Chris Tedder, MACTEC			Email Results:	Chris Tedder, MACTEC			Jack Friesner, MACTEC
Address:	3199 Riverport Tech Center Dr St. Louis, MO 63043			P. O.				Requested Due Date:				Copy To:
Phone:	314-209-5900			Project Name:	CARTER CARPENTRY			Quote Reference:				
Fax:	314-209-5929			Site Address:				Project Manager				Invoice To:
Location: (State)	MO			Project No:	3250053764.21			Project #				
								Profile #				

[illegible]

SAMPLE NOTES:

Temp in C	2-2
Received on ice	Y/N
Sealed Cooler	Y/N
Sample Intact	Y/N

SAMPLER NAME AND SIGNATURE

PRINT NAME OF SAMPLER

SIGNATURE OF SAMPLER

Additional Comments:

DATE SIGNED:



Sample Condition Upon Receipt

Client Name: Mattell

Project # 6056849

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other JS

Tracking #: 5538839

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Optional
Proj. Due Date
Proj. Name

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other Frame

Thermometer Used T-142 T-168

Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 7.20C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/9/09 MAI

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>MAI</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>021609-3 2 REAG water</u>	

Client Notification/ Resolution:

Copy COC to Client?

☒ Y ☐ N

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

[Signature]

Date: 4.9.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

April 17, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: Carter Carburator
Pace Project No.: 6056965

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Carter Carburator

Pace Project No.: 6056965

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Carter Carburator

Pace Project No.: 6056965

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6056965001	GW-MW-EE-1	Water	04/09/09 09:55	04/10/09 08:50
6056965002	GW-MW-C-1	Water	04/09/09 09:40	04/10/09 08:50
6056965003	GW-MW-H-1	Water	04/09/09 11:05	04/10/09 08:50
6056965004	GW-MW-H-1-DUP	Water	04/09/09 11:05	04/10/09 08:50
6056965005	PZ-02W	Water	04/09/09 12:55	04/10/09 08:50
6056965006	PZ-04W	Water	04/09/09 13:10	04/10/09 08:50
6056965007	GW-MW-QQ-15	Water	04/09/09 14:55	04/10/09 08:50
6056965008	GW-MW-QQ-15-DUP	Water	04/09/09 14:55	04/10/09 08:50
6056965009	GW-MW-KK-15	Water	04/09/09 15:05	04/10/09 08:50
6056965010	GW-MW-DD-19	Water	04/09/09 15:30	04/10/09 08:50
6056965011	TRIP BLANK	Water	04/09/09 00:00	04/10/09 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Carter Carburator

Pace Project No.: 6056965

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
6056965001	GW-MW-EE-1	EPA 5030B/8260	PPT	10	PASI-K
6056965002	GW-MW-C-1	EPA 5030B/8260	PPT	10	PASI-K
6056965003	GW-MW-H-1	EPA 5030B/8260	PPT	10	PASI-K
6056965004	GW-MW-H-1-DUP	EPA 5030B/8260	PPT	10	PASI-K
6056965005	PZ-02W	EPA 5030B/8260	PPT	10	PASI-K
6056965006	PZ-04W	EPA 5030B/8260	PPT	10	PASI-K
6056965007	GW-MW-QQ-15	EPA 5030B/8260	PPT	10	PASI-K
6056965008	GW-MW-QQ-15-DUP	EPA 5030B/8260	PPT	10	PASI-K
6056965009	GW-MW-KK-15	EPA 5030B/8260	PPT	10	PASI-K
6056965010	GW-MW-DD-19	EPA 5030B/8260	PPT	10	PASI-K
6056965011	TRIP BLANK	EPA 5030B/8260	PPT	10	PASI-K

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Carter Carburator
Pace Project No.: 6056965

Method: EPA 5030B/8260
Description: 8260 MSV
Client: Mactec
Date: April 17, 2009

General Information:

11 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/20550

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/20550

1e: Surrogate recovery outside of QC limits due to preservative.

- GW-MW-DD-19 (Lab ID: 6056965010)
 - Dibromofluoromethane (S)
- GW-MW-H-1-DUP (Lab ID: 6056965004)
 - Dibromofluoromethane (S)
- PZ-02W (Lab ID: 6056965005)
 - Dibromofluoromethane (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Carter Carburator

Pace Project No.: 6056965

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Mactec

Date: April 17, 2009

Analyte Comments:

QC Batch: MSV/20550

1e: Surrogate recovery outside of QC limits due to preservative.

- PZ-04W (Lab ID: 6056965006)
 - Dibromofluoromethane (S)
- TRIP BLANK (Lab ID: 6056965011)
 - Dibromofluoromethane (S)

2e: Surrogate recovery outside of QC limits due to preservative.

- GW-MW-H-1 (Lab ID: 6056965003)
 - Dibromofluoromethane (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-EE-1		Lab ID: 6056965001		Collected: 04/09/09 09:55		Received: 04/10/09 08:50		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260							
cis-1,2-Dichloroethene		122	ug/L	1.0	1		04/15/09 10:22	156-59-2	
trans-1,2-Dichloroethene		ND	ug/L	1.0	1		04/15/09 10:22	156-60-5	
Tetrachloroethene		ND	ug/L	1.0	1		04/15/09 10:22	127-18-4	
Trichloroethene		ND	ug/L	1.0	1		04/15/09 10:22	79-01-6	
Vinyl chloride		97.5	ug/L	1.0	1		04/15/09 10:22	75-01-4	
4-Bromofluorobenzene (S)		90	%	87-115	1		04/15/09 10:22	460-00-4	
Dibromofluoromethane (S)		90	%	87-113	1		04/15/09 10:22	1868-53-7	
1,2-Dichloroethane-d4 (S)		103	%	81-121	1		04/15/09 10:22	17060-07-0	
Toluene-d8 (S)		99	%	89-111	1		04/15/09 10:22	2037-26-5	
Preservation pH		12.0		0.10	1		04/15/09 10:22		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-C-1		Lab ID: 6056965002	Collected: 04/09/09 09:40	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	28.4	ug/L	1.0	1		04/15/09 10:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 10:38	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 10:38	127-18-4	
Trichloroethene	4.9	ug/L	1.0	1		04/15/09 10:38	79-01-6	
Vinyl chloride	5.4	ug/L	1.0	1		04/15/09 10:38	75-01-4	
4-Bromofluorobenzene (S)	94	%	87-115	1		04/15/09 10:38	460-00-4	
Dibromofluoromethane (S)	90	%	87-113	1		04/15/09 10:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	81-121	1		04/15/09 10:38	17060-07-0	
Toluene-d8 (S)	103	%	89-111	1		04/15/09 10:38	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 10:38		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-H-1		Lab ID: 6056965003	Collected: 04/09/09 11:05	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 10:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 10:55	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 10:55	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		04/15/09 10:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/15/09 10:55	75-01-4	
4-Bromofluorobenzene (S)	92	%	87-115	1		04/15/09 10:55	460-00-4	
Dibromofluoromethane (S)	85	%	87-113	1		04/15/09 10:55	1868-53-7	2e
1,2-Dichloroethane-d4 (S)	101	%	81-121	1		04/15/09 10:55	17060-07-0	
Toluene-d8 (S)	101	%	89-111	1		04/15/09 10:55	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 10:55		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-H-1-DUP		Lab ID: 6056965004	Collected: 04/09/09 11:05	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 11:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 11:11	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/15/09 11:11	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/15/09 11:11	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/15/09 11:11	75-01-4	
4-Bromofluorobenzene (S)	90 %		87-115	1		04/15/09 11:11	460-00-4	
Dibromofluoromethane (S)	86 %		87-113	1		04/15/09 11:11	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	101 %		81-121	1		04/15/09 11:11	17060-07-0	
Toluene-d8 (S)	103 %		89-111	1		04/15/09 11:11	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 11:11		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: PZ-02W		Lab ID: 6056965005	Collected: 04/09/09 12:55	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	29.8	ug/L	1.0	1		04/15/09 11:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 11:28	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 11:28	127-18-4	
Trichloroethene	3.8	ug/L	1.0	1		04/15/09 11:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/15/09 11:28	75-01-4	
4-Bromofluorobenzene (S)	93	%	87-115	1		04/15/09 11:28	460-00-4	
Dibromofluoromethane (S)	86	%	87-113	1		04/15/09 11:28	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	104	%	81-121	1		04/15/09 11:28	17060-07-0	
Toluene-d8 (S)	101	%	89-111	1		04/15/09 11:28	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 11:28		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: PZ-04W		Lab ID: 6056965006	Collected: 04/09/09 13:10	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	9.7 ug/L		1.0	1		04/15/09 11:44	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 11:44	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/15/09 11:44	127-18-4	
Trichloroethene	2.7 ug/L		1.0	1		04/15/09 11:44	79-01-6	
Vinyl chloride	33.7 ug/L		1.0	1		04/15/09 11:44	75-01-4	
4-Bromofluorobenzene (S)	98 %		87-115	1		04/15/09 11:44	460-00-4	
Dibromofluoromethane (S)	87 %		87-113	1		04/15/09 11:44	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	107 %		81-121	1		04/15/09 11:44	17060-07-0	
Toluene-d8 (S)	103 %		89-111	1		04/15/09 11:44	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 11:44		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-QQ-15		Lab ID: 6056965007	Collected: 04/09/09 14:55	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 12:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 12:00	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 12:00	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		04/15/09 12:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/15/09 12:00	75-01-4	
4-Bromofluorobenzene (S)	94	%	87-115	1		04/15/09 12:00	460-00-4	
Dibromofluoromethane (S)	90	%	87-113	1		04/15/09 12:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	81-121	1		04/15/09 12:00	17060-07-0	
Toluene-d8 (S)	103	%	89-111	1		04/15/09 12:00	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 12:00		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-QQ-15-DUP		Lab ID: 6056965008		Collected: 04/09/09 14:55		Received: 04/10/09 08:50		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260							
cis-1,2-Dichloroethene		ND	ug/L	1.0	1		04/15/09 12:17	156-59-2	
trans-1,2-Dichloroethene		ND	ug/L	1.0	1		04/15/09 12:17	156-60-5	
Tetrachloroethene		ND	ug/L	1.0	1		04/15/09 12:17	127-18-4	
Trichloroethene		ND	ug/L	1.0	1		04/15/09 12:17	79-01-6	
Vinyl chloride		ND	ug/L	1.0	1		04/15/09 12:17	75-01-4	
4-Bromofluorobenzene (S)		94	%	87-115	1		04/15/09 12:17	460-00-4	
Dibromofluoromethane (S)		98	%	87-113	1		04/15/09 12:17	1868-53-7	
1,2-Dichloroethane-d4 (S)		104	%	81-121	1		04/15/09 12:17	17060-07-0	
Toluene-d8 (S)		102	%	89-111	1		04/15/09 12:17	2037-26-5	
Preservation pH		12.0		0.10	1		04/15/09 12:17		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-KK-15		Lab ID: 6056965009	Collected: 04/09/09 15:05	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 12:33	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/15/09 12:33	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/15/09 12:33	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/15/09 12:33	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/15/09 12:33	75-01-4	
4-Bromofluorobenzene (S)	94 %		87-115	1		04/15/09 12:33	460-00-4	
Dibromofluoromethane (S)	98 %		87-113	1		04/15/09 12:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	106 %		81-121	1		04/15/09 12:33	17060-07-0	
Toluene-d8 (S)	102 %		89-111	1		04/15/09 12:33	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 12:33		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: GW-MW-DD-19		Lab ID: 6056965010	Collected: 04/09/09 15:30	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	15.3	ug/L	1.0	1		04/15/09 12:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 12:50	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 12:50	127-18-4	
Trichloroethene	19.5	ug/L	1.0	1		04/15/09 12:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/15/09 12:50	75-01-4	
4-Bromofluorobenzene (S)	92	%	87-115	1		04/15/09 12:50	460-00-4	
Dibromofluoromethane (S)	77	%	87-113	1		04/15/09 12:50	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	105	%	81-121	1		04/15/09 12:50	17060-07-0	
Toluene-d8 (S)	103	%	89-111	1		04/15/09 12:50	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 12:50		

ANALYTICAL RESULTS

Project: Carter Carburator

Pace Project No.: 6056965

Sample: TRIP BLANK		Lab ID: 6056965011	Collected: 04/09/09 00:00	Received: 04/10/09 08:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 13:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/15/09 13:06	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/15/09 13:06	127-18-4	
Trichloroethene	ND	ug/L	1.0	1		04/15/09 13:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/15/09 13:06	75-01-4	
4-Bromofluorobenzene (S)	91	%	87-115	1		04/15/09 13:06	460-00-4	
Dibromofluoromethane (S)	67	%	87-113	1		04/15/09 13:06	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	105	%	81-121	1		04/15/09 13:06	17060-07-0	
Toluene-d8 (S)	103	%	89-111	1		04/15/09 13:06	2037-26-5	
Preservation pH	12.0		0.10	1		04/15/09 13:06		

QUALITY CONTROL DATA

Project: Carter Carburator

Pace Project No.: 6056965

QC Batch: MSV/20550 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 6056965001, 6056965002, 6056965003, 6056965004, 6056965005, 6056965006, 6056965007, 6056965008, 6056965009, 6056965010, 6056965011

METHOD BLANK: 469220

Matrix: Water

Associated Lab Samples: 6056965001, 6056965002, 6056965003, 6056965004, 6056965005, 6056965006, 6056965007, 6056965008, 6056965009, 6056965010, 6056965011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Tetrachloroethene	ug/L	ND	1.0	04/15/09 09:00	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Trichloroethene	ug/L	ND	1.0	04/15/09 09:00	
Vinyl chloride	ug/L	ND	1.0	04/15/09 09:00	
1,2-Dichloroethane-d4 (S)	%	106	81-121	04/15/09 09:00	
4-Bromofluorobenzene (S)	%	91	87-115	04/15/09 09:00	
Dibromofluoromethane (S)	%	103	87-113	04/15/09 09:00	
Toluene-d8 (S)	%	104	89-111	04/15/09 09:00	

LABORATORY CONTROL SAMPLE: 469221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	10	9.3	93	80-119	
Tetrachloroethene	ug/L	10	10.5	105	73-122	
trans-1,2-Dichloroethene	ug/L	10	10.1	101	75-122	
Trichloroethene	ug/L	10	10.3	103	78-119	
Vinyl chloride	ug/L	10	8.8	88	67-139	
1,2-Dichloroethane-d4 (S)	%			99	81-121	
4-Bromofluorobenzene (S)	%			95	87-115	
Dibromofluoromethane (S)	%			102	87-113	
Toluene-d8 (S)	%			102	89-111	

QUALIFIERS

Project: Carter Carburator

Pace Project No.: 6056965

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: MSV/20550

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Surrogate recovery outside of QC limits due to preservative.

2e Surrogate recovery outside of QC limits due to preservative.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Carter Carburator

Pace Project No.: 6056965

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6056965001	GW-MW-EE-1	EPA 5030B/8260	MSV/20550		
6056965002	GW-MW-C-1	EPA 5030B/8260	MSV/20550		
6056965003	GW-MW-H-1	EPA 5030B/8260	MSV/20550		
6056965004	GW-MW-H-1-DUP	EPA 5030B/8260	MSV/20550		
6056965005	PZ-02W	EPA 5030B/8260	MSV/20550		
6056965006	PZ-04W	EPA 5030B/8260	MSV/20550		
6056965007	GW-MW-QQ-15	EPA 5030B/8260	MSV/20550		
6056965008	GW-MW-QQ-15-DUP	EPA 5030B/8260	MSV/20550		
6056965009	GW-MW-KK-15	EPA 5030B/8260	MSV/20550		
6056965010	GW-MW-DD-19	EPA 5030B/8260	MSV/20550		
6056965011	TRIP BLANK	EPA 5030B/8260	MSV/20550		

Required Client Information: Section A				Required Client Information: Section B				Required Client Information: Section C																				
Company:	MACTEC	Report To:	Chris Tedder, MACTEC	Email Results:	Chris Tedder, MACTEC	Copy To:	Jack Friesner, MACTEC																					
Address:	3199 Riverport Tech Center Dr St. Louis, MO 63043	P. O.:	200904618	Requested Due Date:		Invoice To:																						
Phone:	314-209-5900	Project Name:	CARTER CARBURIDE	Quote Reference:		Project Manager:																						
Fax:	314-209-5929	Site Address:		Project #:		Profile #:																						
Location (State):	MO	Project No.:	3250055164.21	Preservatives:		Requested Analysis:																						
ITEM NUMBER	SAMPLE ID (print clearly)	Matrix ID:	Water	Tissue	Other:	Soil	Oil	Wipe	Air	Sample Matrix	Date Collected	Time Collected	# of Containers	Unpreserved	H2SO4	HNO3	HCl	NaOH	TSP or Na2S2O3	Methanol	VOC (B20) 3X40 ml Vial	RECEIVED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	REMARKS / LAB ID
1	GW-MW-EE-1									Water	4-9-09	0955	3						3		X							001
2	GW-MW-C-1									Water		0940	3						3		X							002
3	GW-MW-H-1									Water		1105	3						3		X							003
4	GW-MW-H-1-DUP									Water		1105	3						3		X							004
5	PZ-02W									Water		1255	3						3		X							005
6	PZ-04W									Water		1310	3						3		X							006
7	GW-MW-QQ-15									Water		1455	3						3		X							007
8	GW-MW-QQ-15 DUP									Water		1455	3						3		X							008
9	GW-MW-KK-15									Water		1505	3						3		X							009
10	GW-MW-DD-19									Water		1530	3						3		X							010
11	TRIP BLANK									Water		-	2						2		X							011
12										Water																		

SHIPMENT METHOD	PK UP	AIRBILL NO.		SHIPPING DATE	4-9-09	NO. OF COOLERS	1	ITEM#	
SAMPLE NOTES:									
Temp in C	3.2	Received on ice	Q/N	Sealed Cooler	Q/N	Sample Intact	Q/N		

SAMPLER NAME AND SIGNATURE	
PRINT NAME OF SAMPLER	JACKIE FRIESNER
SIGNATURE OF SAMPLER	<i>[Signature]</i>
DATE SIGNED	4-9-09



Sample Condition Upon Receipt

Client Name: Mactec

Project # 6056965

4123

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other JSL

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☒ Yes ☐ No

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used T-142 T-168

Type of Ice: Wet Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 3-2

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: JMA 4/10/09

Temp should be above freezing to 6°C

Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>water</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>N/A</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>02169.3</u>		

Client Notification/ Resolution:

Copy COC to Client?

☒ Y / N

Field Data Required?

Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 4.13.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

April 17, 2009

Mr. Chris Tedder
Mactec
3199 Riverport Tech Center Dr
Maryland Heights, MO 63043

RE: Project: CARTER CARBURETOR
Pace Project No.: 6057024

Dear Mr. Tedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sherri Guess

sherri.guess@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Kansas Certification IDs

Utah Certification #: 9135995665

Texas Certification #: T104704407-08-TX

Oklahoma Certification #: 9205/9935

Nevada Certification #: KS000212008A

Louisiana Certification #: 03055

Kansas/NELAP Certification #: E-10116

Iowa Certification #: 118

Illinois Certification #: 001191

Arkansas Certification #: 05-008-0

A2LA Certification #: 2456.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6057024001	UST-06W	Water	04/10/09 10:10	04/11/09 09:15
6057024002	GW-MW-FF-4	Water	04/10/09 10:20	04/11/09 09:15
6057024003	GW-MW-RR-5	Water	04/10/09 10:40	04/11/09 09:15
6057024004	GW-MW-PP-10	Water	04/10/09 11:20	04/11/09 09:15
6057024005	UST-08W	Water	04/10/09 11:30	04/11/09 09:15
6057024006	PZ-01	Water	04/10/09 12:30	04/11/09 09:15
6057024007	UST-07W	Water	04/10/09 13:05	04/11/09 09:15
6057024008	UST-07W DUP	Water	04/10/09 13:05	04/11/09 09:15
6057024009	UST-09W	Water	04/10/09 13:50	04/11/09 09:15
6057024010	TRIP BLANK	Water	04/10/09 08:00	04/11/09 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
6057024001	UST-06W	EPA 5030B/8260	JTK	10	PASI-K
6057024002	GW-MW-FF-4	EPA 5030B/8260	JTK	10	PASI-K
6057024003	GW-MW-RR-5	EPA 5030B/8260	JTK	10	PASI-K
6057024004	GW-MW-PP-10	EPA 5030B/8260	JTK	10	PASI-K
6057024005	UST-08W	EPA 5030B/8260	JTK	10	PASI-K
6057024006	PZ-01	EPA 5030B/8260	JTK	10	PASI-K
6057024007	UST-07W	EPA 5030B/8260	JTK	10	PASI-K
6057024008	UST-07W DUP	EPA 5030B/8260	JTK	10	PASI-K
6057024009	UST-09W	EPA 5030B/8260	JTK	10	PASI-K
6057024010	TRIP BLANK	EPA 5030B/8260	JTK	10	PASI-K

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Mactec

Date: April 17, 2009

General Information:

10 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/20572

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/20572

1e: Surrogate recovery outside laboratory control limits due to preservation of sample.

- GW-MW-RR-5 (Lab ID: 6057024003)
 - Dibromofluoromethane (S)
- PZ-01 (Lab ID: 6057024006)
 - Dibromofluoromethane (S)
- TRIP BLANK (Lab ID: 6057024010)
 - Dibromofluoromethane (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Mactec

Date: April 17, 2009

Analyte Comments:

QC Batch: MSV/20572

1e: Surrogate recovery outside laboratory control limits due to preservation of sample.

- UST-07W (Lab ID: 6057024007)
 - Dibromofluoromethane (S)
- UST-07W DUP (Lab ID: 6057024008)
 - Dibromofluoromethane (S)
- UST-09W (Lab ID: 6057024009)
 - Dibromofluoromethane (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: UST-06W		Lab ID: 6057024001	Collected: 04/10/09 10:10	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	35300	ug/L	500	500		04/17/09 11:12	156-59-2	
trans-1,2-Dichloroethene	205	ug/L	100	100		04/16/09 19:27	156-60-5	
Tetrachloroethene	ND	ug/L	100	100		04/16/09 19:27	127-18-4	
Trichloroethene	3730	ug/L	100	100		04/16/09 19:27	79-01-6	
Vinyl chloride	5700	ug/L	100	100		04/16/09 19:27	75-01-4	
4-Bromofluorobenzene (S)	104	%	87-115	100		04/16/09 19:27	460-00-4	
Dibromofluoromethane (S)	97	%	87-113	100		04/16/09 19:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	81-121	100		04/16/09 19:27	17060-07-0	
Toluene-d8 (S)	97	%	89-111	100		04/16/09 19:27	2037-26-5	
Preservation pH	12.0		0.10	100		04/16/09 19:27		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: GW-MW-FF-4		Lab ID: 6057024002	Collected: 04/10/09 10:20	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	1700	ug/L	20.0	20		04/16/09 19:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	20		04/16/09 19:42	156-60-5	
Tetrachloroethene	ND	ug/L	20.0	20		04/16/09 19:42	127-18-4	
Trichloroethene	20.0	ug/L	20.0	20		04/16/09 19:42	79-01-6	
Vinyl chloride	1850	ug/L	20.0	20		04/16/09 19:42	75-01-4	
4-Bromofluorobenzene (S)	107	%	87-115	20		04/16/09 19:42	460-00-4	
Dibromofluoromethane (S)	94	%	87-113	20		04/16/09 19:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	81-121	20		04/16/09 19:42	17060-07-0	
Toluene-d8 (S)	98	%	89-111	20		04/16/09 19:42	2037-26-5	
Preservation pH	12.0		0.10	20		04/16/09 19:42		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: GW-MW-RR-5		Lab ID: 6057024003	Collected: 04/10/09 10:40	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	172	ug/L	5.0	5		04/16/09 19:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		04/16/09 19:57	156-60-5	
Tetrachloroethene	ND	ug/L	5.0	5		04/16/09 19:57	127-18-4	
Trichloroethene	175	ug/L	5.0	5		04/16/09 19:57	79-01-6	
Vinyl chloride	ND	ug/L	5.0	5		04/16/09 19:57	75-01-4	
4-Bromofluorobenzene (S)	101	%	87-115	5		04/16/09 19:57	460-00-4	
Dibromofluoromethane (S)	81	%	87-113	5		04/16/09 19:57	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	106	%	81-121	5		04/16/09 19:57	17060-07-0	
Toluene-d8 (S)	100	%	89-111	5		04/16/09 19:57	2037-26-5	
Preservation pH	12.0		0.10	5		04/16/09 19:57		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: GW-MW-PP-10		Lab ID: 6057024004	Collected: 04/10/09 11:20	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	211	ug/L	5.0	5		04/16/09 20:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		04/16/09 20:12	156-60-5	
Tetrachloroethene	ND	ug/L	5.0	5		04/16/09 20:12	127-18-4	
Trichloroethene	362	ug/L	5.0	5		04/16/09 20:12	79-01-6	
Vinyl chloride	ND	ug/L	5.0	5		04/16/09 20:12	75-01-4	
4-Bromofluorobenzene (S)	107	%	87-115	5		04/16/09 20:12	460-00-4	
Dibromofluoromethane (S)	94	%	87-113	5		04/16/09 20:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	81-121	5		04/16/09 20:12	17060-07-0	
Toluene-d8 (S)	99	%	89-111	5		04/16/09 20:12	2037-26-5	
Preservation pH	12.0		0.10	5		04/16/09 20:12		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: UST-08W		Lab ID: 6057024005	Collected: 04/10/09 11:30	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	335	ug/L	5.0	5		04/16/09 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		04/16/09 20:27	156-60-5	
Tetrachloroethene	ND	ug/L	5.0	5		04/16/09 20:27	127-18-4	
Trichloroethene	344	ug/L	5.0	5		04/16/09 20:27	79-01-6	
Vinyl chloride	54.0	ug/L	5.0	5		04/16/09 20:27	75-01-4	
4-Bromofluorobenzene (S)	108	%	87-115	5		04/16/09 20:27	460-00-4	
Dibromofluoromethane (S)	90	%	87-113	5		04/16/09 20:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	81-121	5		04/16/09 20:27	17060-07-0	
Toluene-d8 (S)	97	%	89-111	5		04/16/09 20:27	2037-26-5	
Preservation pH	12.0		0.10	5		04/16/09 20:27		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: PZ-01		Lab ID: 6057024006	Collected: 04/10/09 12:30	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 20:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 20:42	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/16/09 20:42	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/16/09 20:42	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/16/09 20:42	75-01-4	
4-Bromofluorobenzene (S)	107 %		87-115	1		04/16/09 20:42	460-00-4	
Dibromofluoromethane (S)	67 %		87-113	1		04/16/09 20:42	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	106 %		81-121	1		04/16/09 20:42	17060-07-0	
Toluene-d8 (S)	99 %		89-111	1		04/16/09 20:42	2037-26-5	
Preservation pH	12.0		0.10	1		04/16/09 20:42		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: UST-07W		Lab ID: 6057024007	Collected: 04/10/09 13:05	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/16/09 20:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/16/09 20:57	156-60-5	
Tetrachloroethene	3.7	ug/L	1.0	1		04/16/09 20:57	127-18-4	
Trichloroethene	28.5	ug/L	1.0	1		04/16/09 20:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/16/09 20:57	75-01-4	
4-Bromofluorobenzene (S)	106	%	87-115	1		04/16/09 20:57	460-00-4	
Dibromofluoromethane (S)	69	%	87-113	1		04/16/09 20:57	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	105	%	81-121	1		04/16/09 20:57	17060-07-0	
Toluene-d8 (S)	100	%	89-111	1		04/16/09 20:57	2037-26-5	
Preservation pH	12.0		0.10	1		04/16/09 20:57		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: UST-07W DUP		Lab ID: 6057024008	Collected: 04/10/09 13:05	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/16/09 21:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/16/09 21:12	156-60-5	
Tetrachloroethene	3.6	ug/L	1.0	1		04/16/09 21:12	127-18-4	
Trichloroethene	26.8	ug/L	1.0	1		04/16/09 21:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		04/16/09 21:12	75-01-4	
4-Bromofluorobenzene (S)	106	%	87-115	1		04/16/09 21:12	460-00-4	
Dibromofluoromethane (S)	66	%	87-113	1		04/16/09 21:12	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	105	%	81-121	1		04/16/09 21:12	17060-07-0	
Toluene-d8 (S)	98	%	89-111	1		04/16/09 21:12	2037-26-5	
Preservation pH	12.0		0.10	1		04/16/09 21:12		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: UST-09W		Lab ID: 6057024009	Collected: 04/10/09 13:50	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 21:27	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 21:27	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/16/09 21:27	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/16/09 21:27	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/16/09 21:27	75-01-4	
4-Bromofluorobenzene (S)	98 %		87-115	1		04/16/09 21:27	460-00-4	
Dibromofluoromethane (S)	70 %		87-113	1		04/16/09 21:27	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	106 %		81-121	1		04/16/09 21:27	17060-07-0	
Toluene-d8 (S)	99 %		89-111	1		04/16/09 21:27	2037-26-5	
Preservation pH	12.0		0.10	1		04/16/09 21:27		

ANALYTICAL RESULTS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Sample: TRIP BLANK		Lab ID: 6057024010	Collected: 04/10/09 08:00	Received: 04/11/09 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
cis-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 21:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		04/16/09 21:42	156-60-5	
Tetrachloroethene	ND ug/L		1.0	1		04/16/09 21:42	127-18-4	
Trichloroethene	ND ug/L		1.0	1		04/16/09 21:42	79-01-6	
Vinyl chloride	ND ug/L		1.0	1		04/16/09 21:42	75-01-4	
4-Bromofluorobenzene (S)	109 %		87-115	1		04/16/09 21:42	460-00-4	
Dibromofluoromethane (S)	62 %		87-113	1		04/16/09 21:42	1868-53-7	1e
1,2-Dichloroethane-d4 (S)	103 %		81-121	1		04/16/09 21:42	17060-07-0	
Toluene-d8 (S)	98 %		89-111	1		04/16/09 21:42	2037-26-5	
Preservation pH	12.0		0.10	1		04/16/09 21:42		

QUALITY CONTROL DATA

Project: CARTER CARBURETOR

Pace Project No.: 6057024

QC Batch:	MSV/20572	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	6057024001, 6057024002, 6057024003, 6057024004, 6057024005, 6057024006, 6057024007, 6057024008, 6057024009, 6057024010		

METHOD BLANK: 469571 Matrix: Water

Associated Lab Samples: 6057024001, 6057024002, 6057024003, 6057024004, 6057024005, 6057024006, 6057024007, 6057024008, 6057024009, 6057024010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/16/09 19:12	
Tetrachloroethene	ug/L	ND	1.0	04/16/09 19:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/16/09 19:12	
Trichloroethene	ug/L	ND	1.0	04/16/09 19:12	
Vinyl chloride	ug/L	ND	1.0	04/16/09 19:12	
1,2-Dichloroethane-d4 (S)	%	103	81-121	04/16/09 19:12	
4-Bromofluorobenzene (S)	%	107	87-115	04/16/09 19:12	
Dibromofluoromethane (S)	%	96	87-113	04/16/09 19:12	
Toluene-d8 (S)	%	98	89-111	04/16/09 19:12	

LABORATORY CONTROL SAMPLE: 469572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	10	9.3	93	80-119	
Tetrachloroethene	ug/L	10	9.7	97	73-122	
trans-1,2-Dichloroethene	ug/L	10	9.2	92	75-122	
Trichloroethene	ug/L	10	10	100	78-119	
Vinyl chloride	ug/L	10	10.2	102	67-139	
1,2-Dichloroethane-d4 (S)	%			102	81-121	
4-Bromofluorobenzene (S)	%			105	87-115	
Dibromofluoromethane (S)	%			97	87-113	
Toluene-d8 (S)	%			99	89-111	

QUALIFIERS

Project: CARTER CARBURETOR

Pace Project No.: 6057024

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: MSV/20572

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Surrogate recovery outside laboratory control limits due to preservation of sample.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CARTER CARBURETOR

Pace Project No.: 6057024

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6057024001	UST-06W	EPA 5030B/8260	MSV/20572		
6057024002	GW-MW-FF-4	EPA 5030B/8260	MSV/20572		
6057024003	GW-MW-RR-5	EPA 5030B/8260	MSV/20572		
6057024004	GW-MW-PP-10	EPA 5030B/8260	MSV/20572		
6057024005	UST-08W	EPA 5030B/8260	MSV/20572		
6057024006	PZ-01	EPA 5030B/8260	MSV/20572		
6057024007	UST-07W	EPA 5030B/8260	MSV/20572		
6057024008	UST-07W DUP	EPA 5030B/8260	MSV/20572		
6057024009	UST-09W	EPA 5030B/8260	MSV/20572		
6057024010	TRIP BLANK	EPA 5030B/8260	MSV/20572		

Required Client Information: Section A		Required Client Information: Section B	
Company: MACTEC	Report To: Chris Tedder, MACTEC	Email Results: Chris Tedder, MACTEC	Jack Friesner, MACTEC
Address: 3199 Riverport Tech Center Dr	P. O. 200904618	Requested Due Date:	Copy To:
St. Louis, MO 63043	Project Name: CARFEL CARBURATOR	Quote Reference:	
Phone: 314-209-5900	Site Address:	Project Manager	Invoice To:
Fax: 314-209-5929		Project #	
Location: (State) MO	Project No: 3250055147.21	Profile #	

ITEM NUMBER	Required Client Information:		Matrix ID:		Sample Matrix	Date Collected	Time Collected	# of Containers	Preservatives						Requested Analysis										REMARKS / LAB ID	
	SAMPLE ID (print clearly)		Water	Tissue					Soil	Other:	Unpreserved	H2SO4	HN03	HCl	NaOH	TSP or Na2S203	Methanol	VOC (8260) 3X40 ml Vial								
1	VST-06W				Water	4-10-09	1010	3																	310494	0.1
2	GW-MW-FF-4				Water		1020	3																	6	0.2
3	GW-MW-RR-5				Water		1040	2																	210494	0.3
4	GW-MW-PP-10				Water		1120	3																	310494	0.5
5	VST-08W				Water		1130	3																	6	0.5
6	PZ-01				Water		1230	2																	210494	0.5
7	VST-07W				Water		1305	3																	310494	0.7
8	VST-07W DUP				Water		1305	3																	6	0.8
9	VST-09W				Water		1350	3																	6	0.5
10	TRIP BLANK				Water	↓	—	2																	210494	0.1
11					Water																					
12					Water																					
SHIPMENT METHOD			AIRBILL NO.		SHIPPING DATE		ITEM#	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME													
Pick Up					4-10-09			WAS 2 UNIT-2	4-10-09	15:20	WAS 2 UNIT-2	4-10-09	15:20													

SHIPMENT METHOD		AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM#	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME								
Pick Up			4-10-09	1		Chris Tedder, MACTEC	4-10-09	1535	Jack Friesner	4-10-09	1535								
<p>SAMPLE CONDITION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Temp in C</td><td>1.2</td></tr> <tr><td>Received on ice</td><td>YN</td></tr> <tr><td>Sealed Cooler</td><td>YN</td></tr> <tr><td>Sample Intact</td><td>YN</td></tr> </table>												Temp in C	1.2	Received on ice	YN	Sealed Cooler	YN	Sample Intact	YN
Temp in C	1.2																		
Received on ice	YN																		
Sealed Cooler	YN																		
Sample Intact	YN																		
<p>SAMPLE NOTES:</p>																			
<p>SAMPLER NAME AND SIGNATURE</p> <p>PRINT NAME OF SAMPLER: JACK FRIESNER</p> <p>SIGNATURE OF SAMPLER: <i>[Signature]</i></p> <p>DATE SIGNED: 4-10-09</p>																			



Sample Condition Upon Receipt

Client Name:

Mactec

Project #

Leas 7024

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other JSL

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other Forms

Thermometer Used T-442 7-168

Type of Ice: Wet Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 1.2

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/11/09 JAS

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>wt</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>/</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>021609-3</u>		

Client Notification/ Resolution:

Copy COC to Client?

Y Y N

Field Data Required?

Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Squire

Date:

4.13.09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



engineering and constructing a better tomorrow

May 26, 2009

Mr. Richard Hyink
ACF Industries LLC
101 Clark St.
St. Charles, MO 63301-2075

**RE: Proposal for Phase II Soil Vapor Sampling
Former Carter Carburetor Facility
2840 N. Spring Avenue, St. Louis Missouri**

Dear Mr. Hyink:

MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to submit this proposal to install and sample soil gas sampling points at the former Carter Carburetor Facility (Site) located at 2840 N. Spring Avenue, St. Louis, Missouri. The purpose of the soil gas sampling is to determine the extent of vapor impacts from volatile organics within the subsurface.

A summary of the project information, proposed scope of work, organization, schedule, and estimated fees are presented in the following sections of this proposal.

Proposed Scope of Work

MACTEC is proposing to conduct an evaluation of subsurface organic vapors by conducting sampling in phases. The initial sampling, conducted by the USEPA, concentrated on the area immediately adjacent to the former TCE AST and the interior of the CBI and Willco Plastics buildings. The second phase will consist of sampling near the northeast corner of the CBI Building and along the south edge of the CBI Building. The sampling locations are based on the results of the USEPA sub-slab vapor sampling and the preliminary results of groundwater samples collected in March/April 2009. The sub-slab vapor sampling results and the preliminary groundwater analytical results are shown on Figure 1. The results of the second phase of sampling will aid in the placement of additional sampling locations, if necessary. The preliminary groundwater sample results show that the groundwater plume does not extend significantly beyond the footprint of the CBI Building.

During the installation of the groundwater monitoring wells completed in March, 2009, subsurface obstructions were present along the north perimeter of the CBI Building and a proposed groundwater

monitoring well was not installed at that location at that time. Additional utility locating will be conducted prior to this proposed field effort and a replacement groundwater well will be installed near the northeast corner of the CBI Building.

Probe Installation

MACTEC will utilize direct-push sampling equipment to install the soil gas sample probes. The areas to be sampled are based on the results of the sampling conducted by the USEPA in September, 2008. The soil gas sample locations will be spaced at fifty (50) foot intervals along the northeast corner of the CBI Building and along the south side of the CBI Building, with the approximate locations shown on Figure 1. Some field adjustments to proposed locations may be necessary to avoid damage to underground utilities. The direct-push borings will be advanced to a depth of ten (10) feet below ground surface (bgs), with groundwater depths in the area ranging from nine (9) feet bgs to 17 feet bgs. The borings will be a minimum of 3.25" in diameter. Vapor-sample tubing, equipped with a probe tip, will be installed to approximately nine (9) feet bgs. A sand pack, extending at least six-inches above and six-inches below the probe tip will be installed, with one-foot of dry bentonite above the sand pack. Hydrated bentonite will then be installed to an approximate depth of 3.5 feet bgs. A second sampling probe tip and tubing will then be installed at an approximate depth of 3 feet bgs, with a sand pack extending six inches above and below the sample probe. A second bentonite seal, consisting of dry and hydrated bentonite, will then be installed to the base of the surface completion. In order to allow for future sampling, the surface completion will consist of a flush mounted well cover which will protect the sample valves and caps. A total of 23 soil vapor sample locations are anticipated during this phase of the Soil Vapor Investigation. The design and spacing of the soil gas sampling points is based on the Missouri Department of Natural Resources (MDNR) Soil Gas Sampling Protocol.

The soil gas sample tubing will consist of 1/8- to 1/4- inch stainless steel tubing. The probe tip will be encased in a fine screen mesh to prevent plugging of the tubing. The soil vapor sample surface completion will include gas tight valves and fittings appropriate to seal the tubing and to allow for the collection of the soil gas sample. Immediately upon installation, the tubing will be labeled to identify the near surface sample tubing and the deeper sample tubing.

Sample Collection

In order to collect samples, MACTEC will utilize Summa canisters, supplied by Pace Analytical, pre-evacuated with sufficient vacuum to collect the sample. In order for the sample locations to reach equilibration, the sample locations will be allowed to equilibrate a minimum of 24 hours after installation prior to sampling. After the equilibration period, the sample tubing will be attached to a vacuum pump and purged of a minimum of three volumes, and then the sample container will be attached, using a "tee" fitting to prevent inflow of ambient air, and the sample will be collected at a flow rate not to exceed 200 milliliters per minute (ml/min). During the sample collection period, the

fittings will be tested for leaks using isopropanol as described in the MDNR Soil Gas Sampling Protocol and the sample container will be labeled and the final pressure of the canister will be recorded. The sample containers will be stored out of direct sunlight, at ambient temperature. The samples will be transferred, under standard chain-of-custody procedures, to Pace Analytical for analysis.

Sample Analysis

The soil gas samples will be analyzed by USEPA Method TO15 for tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-DCE), trans-1,2-dichloroethylene, vinyl chloride (VC), and isopropanol. Isopropanol will be used in detecting leaks in the sample trains and is not a constituent of concern. The samples will be submitted to the Pace Analytical laboratory for analysis.

Data Evaluation

Upon completion of the field and lab work, MACTEC will summarize the data, evaluate the data to identify soil vapor hot spots, and prepare exhibits to more accurately depict the conditions at the Site. The results of the soil vapor evaluation will aid in determining the next step in the soil vapor investigation.

Project Management and Communications

The MACTEC Project Manager will be Mr. Chris Tedder, P.G. Mr. Tedder will be the primary contact for the duration of the project and Mr. Tedder will direct the field effort and the completion of the project.

Health and Safety Plan

MACTEC will review the existing Health and Safety Plan (HASP) to insure that the existing HASP meets updated health and safety standards. The elements to be reviewed include: assessment of chemical and physical hazards, site control measures, levels of personal protection, field monitoring requirements, decontamination procedures, training, medical monitoring, and emergency planning.

Schedule

The anticipated schedule is:

1. Notice to Proceed, procure subcontractors and field supplies – 3-4 weeks, depending on the availability of the drilling subcontractor.
2. Perform field work – 4 days to install sample borings, 1 day for equilibration of borings, and 4 days to collect samples
3. Conduct laboratory analyses – 2 weeks

4. Summarize and evaluate data, prepare and submit results – 2 weeks following receipt of analytical data.

Total Estimated Fee

Based on our understanding of the project requirements, we will provide the proposed services for an estimated fee of \$40,795.65. A breakdown of the estimated costs is included as an attachment. The project will be invoiced on a time and materials basis, with no mark-up of the drilling subcontractor.

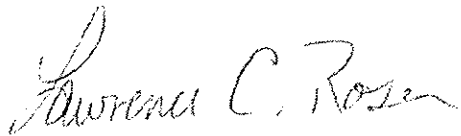
Thank you for the opportunity to support ACF. If you have any questions or require additional information, please contact me at your earliest convenience.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.



Chris L. Tedder, R.G.
Project Manager



Lawrence C. Rosen, R.G.
Principal Scientist

attachments

