APPENDIX F – SOIL LABORATORY REPORTS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 07, 2014

Trevor Gustafson
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114

RE: Project: KDHE NEODESHA
Pace Project No.: 60180688

Dear Trevor Gustafson:
Enclosed are the analytical results for sample(s) received by the laboratory on October 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Angie Brown
Angie.Brown@pacelabs.com
Project Manager

Enclosures

cc: TREVOR GUSTAFSON, BURNS & MCDONNELL

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CERTIFICATIONS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021

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SAMPLE SUMMARY

Project: KDHE NEODESHA
Pace Project No.: 60180688

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60180688001	**TB10172014A**	Solid	10/17/14 08:50	10/18/14 09:40
60180688002	**MW-170 SS1**	Solid	10/17/14 08:55	10/18/14 09:40
60180688003	**MW-170 SS2**	Solid	10/17/14 09:25	10/18/14 09:40
60180688004	**MW-166 SS1**	Solid	10/17/14 10:40	10/18/14 09:40
60180688005	**MW-166 SS2**	Solid	10/17/14 11:00	10/18/14 09:40
60180688006	**MW-152 SS1**	Solid	10/17/14 12:20	10/18/14 09:40
60180688007	**MW-152 SS2**	Solid	10/17/14 12:25	10/18/14 09:40

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SAMPLE ANALYTE COUNT

Project: KDHE NEODESHA
Pace Project No.: 60180688

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60180688001	**TB10172014A**	OA1	JKL	1	PASI-K
		EPA 8260	JKL	49	PASI-K
60180688002	**MW-170 SS1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180688003	**MW-170 SS2**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180688004	**MW-166 SS1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180688005	**MW-166 SS2**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K

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SAMPLE ANALYTE COUNT

Project: KDHE NEODESHA
Pace Project No.: 60180688

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180688006	**MW-152 SS1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180688007	**MW-152 SS2**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Date: November 07, 2014

A library scan was performed for the volatiles method EPA 8260 and the Tentatively Identified Compound reports are included per each sample. The compound Isopropanol was not identified in the search.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **OA2**
Description: OA2 GCS
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for OA2. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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.

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, where applicable, 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: OEXT/46864

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468591)
  - Diesel Fuel
- MSD (Lab ID: 1468592)
  - Diesel Fuel

R1: RPD value was outside control limits.

- MSD (Lab ID: 1468592)
  - Diesel Fuel

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **OA2**
Description: OA2 GCS
Client: Burns and McDonnell_BP
Date: November 07, 2014

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

Analyte Comments:

QC Batch: OEXT/46864

5e: The sample does not match a profile of laboratory standards. Hydrocarbon fractions are present from the mid diesel fuel to late motor oil range. Quantitation achieved using diesel fuel as a reference standard.

- MW-166 SS1 (Lab ID: 60180688004)
  - TEH as Diesel No.2
- MW-166 SS2 (Lab ID: 60180688005)
  - TEH as Diesel No.2
- MW-170 SS1 (Lab ID: 60180688002)
  - TEH as Diesel No.2
- MW-170 SS2 (Lab ID: 60180688003)
  - TEH as Diesel No.2

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 6010**
Description: 6010 MET ICP Red. Interference
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 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.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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: MPRP/29467

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1466780)
  - Barium
- MSD (Lab ID: 1466781)
  - Barium

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 6010**
Description: 6010 MET ICP Red. Interference
Client: Burns and McDonnell_BP
Date: November 07, 2014

Analyte Comments:

QC Batch: MPRP/29467

2e: Post Digestion Spike Performed - 87% Recovery

- MS (Lab ID: 1466780)
  - Barium
- MSD (Lab ID: 1466781)
  - Barium
- MW-170 SS1 (Lab ID: 60180688002)
  - Barium

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MW-166 SS2 (Lab ID: 60180688005)
  - Silver
  - Cadmium
  - Selenium

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 7471**
Description: 7471 Mercury
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for EPA 7471. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 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.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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.

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for EPA 8270 by SIM. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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: OEXT/46866

S0: Surrogate recovery outside laboratory control limits.

- MSD (Lab ID: 1468602)
  - 2-Fluorobiphenyl (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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: OEXT/46866

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180689002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468601)
  - Naphthalene
  - Phenanthrene
- MSD (Lab ID: 1468602)
  - 1-Methylnaphthalene
  - Naphthalene

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Burns and McDonnell_BP
Date: November 07, 2014

QC Batch: OEXT/46866

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180689002

R1: RPD value was outside control limits.

- MSD (Lab ID: 1468602)
  - Benzo(a)pyrene
  - Benzo(g,h,i)perylene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8270**
Description: 8270 MSSV Semivolatiles
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for EPA 8270. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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, where applicable, 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: OEXT/46865

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468597)
  - 2,4-Dinitrophenol
- MSD (Lab ID: 1468598)
  - 2,4-Dinitrophenol

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8270**
Description: 8270 MSSV Semivolatiles
Client: Burns and McDonnell_BP
Date: November 07, 2014

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **OA1**
Description: OA1 Volatile Pet. Hydrocarbons
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
7 samples were analyzed for OA1. 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, where applicable, 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/65434

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

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8260**
Description: 8260 MSV 5035 Low Level
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 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.

H1: Analysis conducted outside the recognized method holding time.
- MW-152 SS1 (Lab ID: 60180688006)
- MW-152 SS2 (Lab ID: 60180688007)

Sample Preparation:
The samples were prepared in accordance with EPA 5035A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: MSV/29163

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.
- BLANK (Lab ID: 1831982)
  - Ethanol
- LCS (Lab ID: 1831983)
  - Ethanol
- LCSD (Lab ID: 1831984)
  - Ethanol

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, where applicable, 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.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8260**
Description: 8260 MSV 5035 Low Level
Client: Burns and McDonnell_BP
Date: November 07, 2014

QC Batch: MSV/29049

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

QC Batch: MSV/29049

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

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

Analyte Comments:

QC Batch: MSV/29049

1e: Data for Ethanol by 8260 is reported after an initial calibration verification with low recovery. Sample was re-analyzed outside of hold under compliant QC conditions and the data has been confirmed.

- MW-166 SS1 (Lab ID: 60180688004)
  - Ethanol
- MW-166 SS2 (Lab ID: 60180688005)
  - Ethanol
- MW-170 SS1 (Lab ID: 60180688002)
  - Ethanol
- MW-170 SS2 (Lab ID: 60180688003)
  - Ethanol

3e: Sample container did not meet EPA or method requirements, and was not frozen within 48 hours of collection.

- MW-152 SS1 (Lab ID: 60180688006)
  - 1,2-Dichloroethane-d4 (S)
- MW-152 SS2 (Lab ID: 60180688007)
  - 1,2-Dichloroethane-d4 (S)

4e: Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

- MW-152 SS1 (Lab ID: 60180688006)
  - 1,2-Dichloroethane-d4 (S)
- MW-166 SS1 (Lab ID: 60180688004)
  - 1,2-Dichloroethane-d4 (S)
- MW-166 SS2 (Lab ID: 60180688005)
  - 1,2-Dichloroethane-d4 (S)
- MW-170 SS1 (Lab ID: 60180688002)
  - 1,2-Dichloroethane-d4 (S)
- MW-170 SS2 (Lab ID: 60180688003)
  - 1,2-Dichloroethane-d4 (S)

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 8260**
Description: 8260 MSV 5035A VOA
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
7 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, where applicable, 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/65433

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

Additional Comments:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Method: **EPA 9045**
Description: 9045 pH Soil
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for EPA 9045. 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.

H1: Analysis conducted outside the EPA method holding time.
- MW-152 SS1 (Lab ID: 60180688006)
- MW-152 SS2 (Lab ID: 60180688007)
- MW-166 SS1 (Lab ID: 60180688004)
- MW-166 SS2 (Lab ID: 60180688005)

H3: Sample was received or analysis requested beyond the recognized method holding time.
- MW-170 SS1 (Lab ID: 60180688002)
- MW-170 SS2 (Lab ID: 60180688003)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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:

Workorder Comments:

All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

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

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: TB10172014A **Lab ID: 60180688001** Collected: 10/17/14 08:50 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.0	1		10/30/14 13:27		
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	20.0	1		10/30/14 13:27	67-64-1	
Acrylonitrile	ND	ug/kg	100	1		10/30/14 13:27	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.0	1		10/30/14 13:27	994-05-8	
Benzene	ND	ug/kg	5.0	1		10/30/14 13:27	71-43-2	
Bromodichloromethane	ND	ug/kg	5.0	1		10/30/14 13:27	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.0	1		10/30/14 13:27	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.0	1		10/30/14 13:27	75-65-0	
n-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	135-98-8	
Carbon disulfide	ND	ug/kg	5.0	1		10/30/14 13:27	75-15-0	
Chlorobenzene	ND	ug/kg	5.0	1		10/30/14 13:27	108-90-7	
Chloroethane	ND	ug/kg	5.0	1		10/30/14 13:27	75-00-3	
Chloroform	ND	ug/kg	5.0	1		10/30/14 13:27	67-66-3	
Chloromethane	ND	ug/kg	5.0	1		10/30/14 13:27	74-87-3	
Dibromochloromethane	ND	ug/kg	5.0	1		10/30/14 13:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		10/30/14 13:27	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		10/30/14 13:27	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.0	1		10/30/14 13:27	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 13:27	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 13:27	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1		10/30/14 13:27	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	1		10/30/14 13:27	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.0	1		10/30/14 13:27	78-87-5	
Diisopropyl ether	ND	ug/kg	5.0	1		10/30/14 13:27	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	100	1		10/30/14 13:27	123-91-1	
Ethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 13:27	637-92-3	
2-Hexanone	ND	ug/kg	20.0	1		10/30/14 13:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		10/30/14 13:27	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1		10/30/14 13:27	99-87-6	
Methylene chloride	ND	ug/kg	5.0	1		10/30/14 13:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.0	1		10/30/14 13:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 13:27	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	103-65-1	
Styrene	ND	ug/kg	5.0	1		10/30/14 13:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		10/30/14 13:27	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		10/30/14 13:27	127-18-4	
Toluene	ND	ug/kg	5.0	1		10/30/14 13:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		10/30/14 13:27	71-55-6	
Trichloroethene	ND	ug/kg	5.0	1		10/30/14 13:27	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		10/30/14 13:27	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:27	108-67-8	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: TB10172014A **Lab ID: 60180688001** Collected: 10/17/14 08:50 Received: 10/18/14 09:40 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							
Vinyl acetate	ND	ug/kg	10.0	1		10/30/14 13:27	108-05-4	
Vinyl chloride	ND	ug/kg	5.0	1		10/30/14 13:27	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1		10/30/14 13:27	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 13:27	2037-26-5	
4-Bromofluorobenzene (S)	100	%	76-123	1		10/30/14 13:27	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	75-129	1		10/30/14 13:27	17060-07-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS1 **Lab ID: 60180688002** Collected: 10/17/14 08:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	68334-30-5	M1,R1
Fuel Oil	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	68553-00-4	
Jet Fuel	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	94114-58-6	
Kerosene	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	8008-20-6	
Mineral Spirits	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	8030-30-6	
Motor Oil	ND	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03	64742-65-0	
TEH as Diesel No.2	**197**	mg/kg	12.7	1	10/28/14 00:00	10/30/14 20:03		5e
Surrogates								
n-Tetracosane (S)	82	%	46-147	1	10/28/14 00:00	10/30/14 20:03	646-31-1	
p-Terphenyl (S)	82	%	41-149	1	10/28/14 00:00	10/30/14 20:03	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**3.9**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:06	7440-38-2	
Barium	**185**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:06	7440-39-3	2e,M1
Cadmium	ND	mg/kg	0.61	1	10/24/14 13:00	10/30/14 10:06	7440-43-9	
Chromium	**15.6**	mg/kg	0.61	1	10/24/14 13:00	10/30/14 10:06	7440-47-3	
Lead	**17.2**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:06	7439-92-1	
Selenium	ND	mg/kg	1.8	1	10/24/14 13:00	10/30/14 10:06	7782-49-2	
Silver	ND	mg/kg	0.86	1	10/24/14 13:00	10/30/14 10:06	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.050	1	10/22/14 09:00	10/22/14 13:37	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**51.1**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	83-32-9	
Acenaphthylene	**7.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	208-96-8	
Anthracene	**202**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	120-12-7	
Benzo(a)anthracene	**151**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	56-55-3	
Benzo(a)pyrene	**104**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	50-32-8	
Benzo(b)fluoranthene	**34.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	205-99-2	
Benzo(g,h,i)perylene	**66.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	191-24-2	
Benzo(k)fluoranthene	**16.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	207-08-9	
Chrysene	**226**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	218-01-9	
Dibenz(a,h)anthracene	**17.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	53-70-3	
Fluoranthene	**58.1**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	206-44-0	
Fluorene	**134**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	86-73-7	
Indeno(1,2,3-cd)pyrene	**20.1**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	193-39-5	
1-Methylnaphthalene	**208**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	90-12-0	
2-Methylnaphthalene	**531**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	91-57-6	
Naphthalene	**80.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	91-20-3	
Phenanthrene	**643**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	85-01-8	
Pyrene	**463**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 12:42	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	87	%	47-120	1	10/28/14 00:00	10/30/14 23:09	321-60-8	
Terphenyl-d14 (S)	88	%	42-127	1	10/28/14 00:00	10/30/14 23:09	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS1 **Lab ID: 60180688002** Collected: 10/17/14 08:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	106-46-7	
Diethylphthalate	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	105-67-9	
Dimethylphthalate	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	131-11-3	
Di-n-butylphthalate	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/30/14 23:09	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09		
4-Nitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/30/14 23:09	100-02-7	
Phenol	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	108-95-2	
Pyridine	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	110-86-1	
Quinoline	ND	ug/kg	424	1	10/28/14 00:00	10/30/14 23:09	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	70	%	15-155	1	10/28/14 00:00	10/30/14 23:09	4165-60-0	
2-Fluorobiphenyl (S)	87	%	20-159	1	10/28/14 00:00	10/30/14 23:09	321-60-8	
Terphenyl-d14 (S)	88	%	18-160	1	10/28/14 00:00	10/30/14 23:09	1718-51-0	
Phenol-d6 (S)	84	%	44-120	1	10/28/14 00:00	10/30/14 23:09	13127-88-3	
2-Fluorophenol (S)	81	%	38-120	1	10/28/14 00:00	10/30/14 23:09	367-12-4	
2,4,6-Tribromophenol (S)	84	%	36-120	1	10/28/14 00:00	10/30/14 23:09	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.2	1		10/30/14 13:58		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	518	1	10/23/14 15:24	10/31/14 15:50	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	30-150	1	10/23/14 15:24	10/31/14 15:50	17060-07-0	4e
Toluene-d8 (S)	106	%.	30-150	1	10/23/14 15:24	10/31/14 15:50	2037-26-5	
4-Bromofluorobenzene (S)	106	%.	30-150	1	10/23/14 15:24	10/31/14 15:50	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	**37.2**	ug/kg	23.8	1		10/30/14 13:58	67-64-1	
Acrylonitrile	ND	ug/kg	119	1		10/30/14 13:58	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	6.0	1		10/30/14 13:58	994-05-8	
Benzene	ND	ug/kg	6.0	1		10/30/14 13:58	71-43-2	
Bromodichloromethane	ND	ug/kg	6.0	1		10/30/14 13:58	75-27-4	
2-Butanone (MEK)	ND	ug/kg	11.9	1		10/30/14 13:58	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	11.9	1		10/30/14 13:58	75-65-0	
n-Butylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	135-98-8	
Carbon disulfide	ND	ug/kg	6.0	1		10/30/14 13:58	75-15-0	
Chlorobenzene	ND	ug/kg	6.0	1		10/30/14 13:58	108-90-7	
Chloroethane	ND	ug/kg	6.0	1		10/30/14 13:58	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS1 **Lab ID: 60180688002** Collected: 10/17/14 08:55 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	6.0	1		10/30/14 13:58	67-66-3	
Chloromethane	ND	ug/kg	6.0	1		10/30/14 13:58	74-87-3	
Dibromochloromethane	ND	ug/kg	6.0	1		10/30/14 13:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1		10/30/14 13:58	106-93-4	
Dibromomethane	ND	ug/kg	6.0	1		10/30/14 13:58	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	6.0	1		10/30/14 13:58	110-57-6	
1,1-Dichloroethane	ND	ug/kg	6.0	1		10/30/14 13:58	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.0	1		10/30/14 13:58	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.0	1		10/30/14 13:58	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.0	1		10/30/14 13:58	75-35-4	
1,2-Dichloropropane	ND	ug/kg	6.0	1		10/30/14 13:58	78-87-5	
Diisopropyl ether	ND	ug/kg	6.0	1		10/30/14 13:58	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	119	1		10/30/14 13:58	123-91-1	
Ethylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	6.0	1		10/30/14 13:58	637-92-3	
2-Hexanone	ND	ug/kg	23.8	1		10/30/14 13:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1		10/30/14 13:58	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1		10/30/14 13:58	99-87-6	
Methylene chloride	ND	ug/kg	6.0	1		10/30/14 13:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.9	1		10/30/14 13:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.0	1		10/30/14 13:58	1634-04-4	
n-Propylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	103-65-1	
Styrene	ND	ug/kg	6.0	1		10/30/14 13:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1		10/30/14 13:58	79-34-5	
Tetrachloroethene	ND	ug/kg	6.0	1		10/30/14 13:58	127-18-4	
Toluene	ND	ug/kg	6.0	1		10/30/14 13:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1		10/30/14 13:58	71-55-6	
Trichloroethene	ND	ug/kg	6.0	1		10/30/14 13:58	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1		10/30/14 13:58	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1		10/30/14 13:58	108-67-8	
Vinyl acetate	ND	ug/kg	11.9	1		10/30/14 13:58	108-05-4	
Vinyl chloride	ND	ug/kg	6.0	1		10/30/14 13:58	75-01-4	
Xylene (Total)	ND	ug/kg	6.0	1		10/30/14 13:58	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 13:58	2037-26-5	
4-Bromofluorobenzene (S)	101	%	76-123	1		10/30/14 13:58	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	75-129	1		10/30/14 13:58	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**23.0**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		11/03/14 13:00		H3

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS2 **Lab ID: 60180688003** Collected: 10/17/14 09:25 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	68334-30-5	
Fuel Oil	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	68553-00-4	
Jet Fuel	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	94114-58-6	
Kerosene	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	8008-20-6	
Mineral Spirits	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	8030-30-6	
Motor Oil	ND	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11	64742-65-0	
TEH as Diesel No.2	**197**	mg/kg	12.1	1	10/28/14 00:00	10/30/14 20:11		5e
Surrogates								
n-Tetracosane (S)	128	%	46-147	1	10/28/14 00:00	10/30/14 20:11	646-31-1	
p-Terphenyl (S)	130	%	41-149	1	10/28/14 00:00	10/30/14 20:11	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**4.3**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:23	7440-38-2	
Barium	**104**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:23	7440-39-3	
Cadmium	ND	mg/kg	0.59	1	10/24/14 13:00	10/30/14 10:23	7440-43-9	
Chromium	**15.0**	mg/kg	0.59	1	10/24/14 13:00	10/30/14 10:23	7440-47-3	
Lead	**15.0**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:23	7439-92-1	
Selenium	ND	mg/kg	1.8	1	10/24/14 13:00	10/30/14 10:23	7782-49-2	
Silver	ND	mg/kg	0.82	1	10/24/14 13:00	10/30/14 10:23	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.059	1	10/22/14 09:00	10/22/14 13:44	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**45.8**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	83-32-9	
Acenaphthylene	**7.5**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	208-96-8	
Anthracene	**179**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	120-12-7	
Benzo(a)anthracene	**169**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	56-55-3	
Benzo(a)pyrene	**127**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	50-32-8	
Benzo(b)fluoranthene	**40.1**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	205-99-2	
Benzo(g,h,i)perylene	**83.4**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	191-24-2	
Benzo(k)fluoranthene	**16.9**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	207-08-9	
Chrysene	**253**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	218-01-9	
Dibenz(a,h)anthracene	**20.4**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	53-70-3	
Fluoranthene	**56.6**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	206-44-0	
Fluorene	**101**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**23.2**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	193-39-5	
1-Methylnaphthalene	**182**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	90-12-0	
2-Methylnaphthalene	**490**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	91-57-6	
Naphthalene	**60.7**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	91-20-3	
Phenanthrene	**727**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	85-01-8	
Pyrene	**497**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 13:01	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	86	%	47-120	1	10/28/14 00:00	10/30/14 23:30	321-60-8	
Terphenyl-d14 (S)	88	%	42-127	1	10/28/14 00:00	10/30/14 23:30	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS2 **Lab ID: 60180688003** Collected: 10/17/14 09:25 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	106-46-7	
Diethylphthalate	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	105-67-9	
Dimethylphthalate	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	131-11-3	
Di-n-butylphthalate	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2020	1	10/28/14 00:00	10/30/14 23:30	51-28-5	M1
bis(2-Ethylhexyl)phthalate	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30		
4-Nitrophenol	ND	ug/kg	2020	1	10/28/14 00:00	10/30/14 23:30	100-02-7	
Phenol	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	108-95-2	
Pyridine	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	110-86-1	
Quinoline	ND	ug/kg	399	1	10/28/14 00:00	10/30/14 23:30	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	76	%	15-155	1	10/28/14 00:00	10/30/14 23:30	4165-60-0	
2-Fluorobiphenyl (S)	86	%	20-159	1	10/28/14 00:00	10/30/14 23:30	321-60-8	
Terphenyl-d14 (S)	88	%	18-160	1	10/28/14 00:00	10/30/14 23:30	1718-51-0	
Phenol-d6 (S)	83	%	44-120	1	10/28/14 00:00	10/30/14 23:30	13127-88-3	
2-Fluorophenol (S)	83	%	38-120	1	10/28/14 00:00	10/30/14 23:30	367-12-4	
2,4,6-Tribromophenol (S)	85	%	36-120	1	10/28/14 00:00	10/30/14 23:30	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.1	1		10/30/14 14:13		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	487	1	10/23/14 15:24	10/31/14 16:09	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%.	30-150	1	10/23/14 15:24	10/31/14 16:09	17060-07-0	4e
Toluene-d8 (S)	100	%.	30-150	1	10/23/14 15:24	10/31/14 16:09	2037-26-5	
4-Bromofluorobenzene (S)	106	%.	30-150	1	10/23/14 15:24	10/31/14 16:09	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	21.0	1		10/30/14 14:13	67-64-1	
Acrylonitrile	ND	ug/kg	105	1		10/30/14 14:13	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.3	1		10/30/14 14:13	994-05-8	
Benzene	ND	ug/kg	5.3	1		10/30/14 14:13	71-43-2	
Bromodichloromethane	ND	ug/kg	5.3	1		10/30/14 14:13	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.5	1		10/30/14 14:13	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.5	1		10/30/14 14:13	75-65-0	
n-Butylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	135-98-8	
Carbon disulfide	ND	ug/kg	5.3	1		10/30/14 14:13	75-15-0	
Chlorobenzene	ND	ug/kg	5.3	1		10/30/14 14:13	108-90-7	
Chloroethane	ND	ug/kg	5.3	1		10/30/14 14:13	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-170 SS2 **Lab ID: 60180688003** Collected: 10/17/14 09:25 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.3	1		10/30/14 14:13	67-66-3	
Chloromethane	ND	ug/kg	5.3	1		10/30/14 14:13	74-87-3	
Dibromochloromethane	ND	ug/kg	5.3	1		10/30/14 14:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	1		10/30/14 14:13	106-93-4	
Dibromomethane	ND	ug/kg	5.3	1		10/30/14 14:13	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.3	1		10/30/14 14:13	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.3	1		10/30/14 14:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.3	1		10/30/14 14:13	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.3	1		10/30/14 14:13	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.3	1		10/30/14 14:13	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.3	1		10/30/14 14:13	78-87-5	
Diisopropyl ether	ND	ug/kg	5.3	1		10/30/14 14:13	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	105	1		10/30/14 14:13	123-91-1	
Ethylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.3	1		10/30/14 14:13	637-92-3	
2-Hexanone	ND	ug/kg	21.0	1		10/30/14 14:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	1		10/30/14 14:13	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.3	1		10/30/14 14:13	99-87-6	
Methylene chloride	ND	ug/kg	5.3	1		10/30/14 14:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.5	1		10/30/14 14:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	1		10/30/14 14:13	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	103-65-1	
Styrene	ND	ug/kg	5.3	1		10/30/14 14:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	1		10/30/14 14:13	79-34-5	
Tetrachloroethene	ND	ug/kg	5.3	1		10/30/14 14:13	127-18-4	
Toluene	ND	ug/kg	5.3	1		10/30/14 14:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.3	1		10/30/14 14:13	71-55-6	
Trichloroethene	ND	ug/kg	5.3	1		10/30/14 14:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	1		10/30/14 14:13	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.3	1		10/30/14 14:13	108-67-8	
Vinyl acetate	ND	ug/kg	10.5	1		10/30/14 14:13	108-05-4	
Vinyl chloride	ND	ug/kg	5.3	1		10/30/14 14:13	75-01-4	
Xylene (Total)	ND	ug/kg	5.3	1		10/30/14 14:13	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 14:13	2037-26-5	
4-Bromofluorobenzene (S)	102	%	76-123	1		10/30/14 14:13	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	75-129	1		10/30/14 14:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**18.2**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		11/03/14 13:00		H3

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS1 **Lab ID: 60180688004** Collected: 10/17/14 10:40 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	68334-30-5	
Fuel Oil	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	68553-00-4	
Jet Fuel	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	94114-58-6	
Kerosene	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	8008-20-6	
Mineral Spirits	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	8030-30-6	
Motor Oil	ND	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18	64742-65-0	
TEH as Diesel No.2	**64.7**	mg/kg	13.0	1	10/28/14 00:00	10/30/14 20:18		5e
Surrogates								
n-Tetracosane (S)	93	%	46-147	1	10/28/14 00:00	10/30/14 20:18	646-31-1	
p-Terphenyl (S)	96	%	41-149	1	10/28/14 00:00	10/30/14 20:18	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**12.9**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:26	7440-38-2	
Barium	**869**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:26	7440-39-3	
Cadmium	ND	mg/kg	0.58	1	10/24/14 13:00	10/30/14 10:26	7440-43-9	
Chromium	**31.5**	mg/kg	0.58	1	10/24/14 13:00	10/30/14 10:26	7440-47-3	
Lead	**33.0**	mg/kg	1.2	1	10/24/14 13:00	10/30/14 10:26	7439-92-1	
Selenium	ND	mg/kg	1.7	1	10/24/14 13:00	10/30/14 10:26	7782-49-2	
Silver	ND	mg/kg	0.82	1	10/24/14 13:00	10/30/14 10:26	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.053	1	10/22/14 09:00	10/22/14 13:46	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**4.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	208-96-8	
Anthracene	**10.9**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	120-12-7	
Benzo(a)anthracene	**66.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	56-55-3	
Benzo(a)pyrene	**36.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	50-32-8	
Benzo(b)fluoranthene	**30.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	205-99-2	
Benzo(g,h,i)perylene	**172**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	191-24-2	
Benzo(k)fluoranthene	**13.9**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	207-08-9	
Chrysene	**109**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	218-01-9	
Dibenz(a,h)anthracene	**25.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	53-70-3	
Fluoranthene	**17.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	206-44-0	
Fluorene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	86-73-7	
Indeno(1,2,3-cd)pyrene	**32.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	193-39-5	
1-Methylnaphthalene	**23.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	90-12-0	
2-Methylnaphthalene	**42.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	91-57-6	
Naphthalene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	91-20-3	
Phenanthrene	**175**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	85-01-8	
Pyrene	**107**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 13:21	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	88	%	47-120	1	10/28/14 00:00	10/31/14 00:35	321-60-8	
Terphenyl-d14 (S)	91	%	42-127	1	10/28/14 00:00	10/31/14 00:35	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS1 **Lab ID: 60180688004** Collected: 10/17/14 10:40 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	106-46-7	
Diethylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	105-67-9	
Dimethylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	131-11-3	
Di-n-butylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2130	1	10/28/14 00:00	10/31/14 00:35	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35		
4-Nitrophenol	ND	ug/kg	2130	1	10/28/14 00:00	10/31/14 00:35	100-02-7	
Phenol	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	108-95-2	
Pyridine	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	110-86-1	
Quinoline	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 00:35	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	85	%	15-155	1	10/28/14 00:00	10/31/14 00:35	4165-60-0	
2-Fluorobiphenyl (S)	88	%	20-159	1	10/28/14 00:00	10/31/14 00:35	321-60-8	
Terphenyl-d14 (S)	91	%	18-160	1	10/28/14 00:00	10/31/14 00:35	1718-51-0	
Phenol-d6 (S)	84	%	44-120	1	10/28/14 00:00	10/31/14 00:35	13127-88-3	
2-Fluorophenol (S)	82	%	38-120	1	10/28/14 00:00	10/31/14 00:35	367-12-4	
2,4,6-Tribromophenol (S)	88	%	36-120	1	10/28/14 00:00	10/31/14 00:35	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.1	1		10/30/14 14:29		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	479	1	10/23/14 15:24	10/31/14 16:27	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	30-150	1	10/23/14 15:24	10/31/14 16:27	17060-07-0	4e
Toluene-d8 (S)	100	%.	30-150	1	10/23/14 15:24	10/31/14 16:27	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	30-150	1	10/23/14 15:24	10/31/14 16:27	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	21.6	1		10/30/14 14:29	67-64-1	
Acrylonitrile	ND	ug/kg	108	1		10/30/14 14:29	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.4	1		10/30/14 14:29	994-05-8	
Benzene	ND	ug/kg	5.4	1		10/30/14 14:29	71-43-2	
Bromodichloromethane	ND	ug/kg	5.4	1		10/30/14 14:29	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.8	1		10/30/14 14:29	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.8	1		10/30/14 14:29	75-65-0	
n-Butylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	135-98-8	
Carbon disulfide	ND	ug/kg	5.4	1		10/30/14 14:29	75-15-0	
Chlorobenzene	ND	ug/kg	5.4	1		10/30/14 14:29	108-90-7	
Chloroethane	ND	ug/kg	5.4	1		10/30/14 14:29	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS1 **Lab ID: 60180688004** Collected: 10/17/14 10:40 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.4	1		10/30/14 14:29	67-66-3	
Chloromethane	ND	ug/kg	5.4	1		10/30/14 14:29	74-87-3	
Dibromochloromethane	ND	ug/kg	5.4	1		10/30/14 14:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.4	1		10/30/14 14:29	106-93-4	
Dibromomethane	ND	ug/kg	5.4	1		10/30/14 14:29	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.4	1		10/30/14 14:29	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.4	1		10/30/14 14:29	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.4	1		10/30/14 14:29	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.4	1		10/30/14 14:29	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.4	1		10/30/14 14:29	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.4	1		10/30/14 14:29	78-87-5	
Diisopropyl ether	ND	ug/kg	5.4	1		10/30/14 14:29	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	108	1		10/30/14 14:29	123-91-1	
Ethylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.4	1		10/30/14 14:29	637-92-3	
2-Hexanone	ND	ug/kg	21.6	1		10/30/14 14:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.4	1		10/30/14 14:29	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.4	1		10/30/14 14:29	99-87-6	
Methylene chloride	ND	ug/kg	5.4	1		10/30/14 14:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.8	1		10/30/14 14:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.4	1		10/30/14 14:29	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	103-65-1	
Styrene	ND	ug/kg	5.4	1		10/30/14 14:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.4	1		10/30/14 14:29	79-34-5	
Tetrachloroethene	ND	ug/kg	5.4	1		10/30/14 14:29	127-18-4	
Toluene	ND	ug/kg	5.4	1		10/30/14 14:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.4	1		10/30/14 14:29	71-55-6	
Trichloroethene	ND	ug/kg	5.4	1		10/30/14 14:29	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.4	1		10/30/14 14:29	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.4	1		10/30/14 14:29	108-67-8	
Vinyl acetate	ND	ug/kg	10.8	1		10/30/14 14:29	108-05-4	
Vinyl chloride	ND	ug/kg	5.4	1		10/30/14 14:29	75-01-4	
Xylene (Total)	ND	ug/kg	5.4	1		10/30/14 14:29	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		10/30/14 14:29	2037-26-5	
4-Bromofluorobenzene (S)	103	%	76-123	1		10/30/14 14:29	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	75-129	1		10/30/14 14:29	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**23.4**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**5.7**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS2 **Lab ID: 60180688005** Collected: 10/17/14 11:00 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	68334-30-5	
Fuel Oil	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	68553-00-4	
Jet Fuel	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	94114-58-6	
Kerosene	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	8008-20-6	
Mineral Spirits	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	8030-30-6	
Motor Oil	ND	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26	64742-65-0	
TEH as Diesel No.2	**119**	mg/kg	11.5	1	10/28/14 00:00	10/30/14 20:26		5e
Surrogates								
n-Tetracosane (S)	114	%	46-147	1	10/28/14 00:00	10/30/14 20:26	646-31-1	
p-Terphenyl (S)	113	%	41-149	1	10/28/14 00:00	10/30/14 20:26	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**11.2**	mg/kg	2.1	2	10/24/14 13:00	10/30/14 10:46	7440-38-2	
Barium	**258**	mg/kg	2.1	2	10/24/14 13:00	10/30/14 10:46	7440-39-3	
Cadmium	ND	mg/kg	1.0	2	10/24/14 13:00	10/30/14 10:46	7440-43-9	D3
Chromium	**35.2**	mg/kg	1.0	2	10/24/14 13:00	10/30/14 10:46	7440-47-3	
Lead	**15.1**	mg/kg	2.1	2	10/24/14 13:00	10/30/14 10:46	7439-92-1	
Selenium	ND	mg/kg	3.1	2	10/24/14 13:00	10/30/14 10:46	7782-49-2	D3
Silver	ND	mg/kg	1.5	2	10/24/14 13:00	10/30/14 10:46	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.058	1	10/22/14 09:00	10/22/14 13:48	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	83-32-9	
Acenaphthylene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	208-96-8	
Anthracene	**4.7**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	120-12-7	
Benzo(a)anthracene	**18.0**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	56-55-3	
Benzo(a)pyrene	**14.3**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	50-32-8	
Benzo(b)fluoranthene	**9.2**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	205-99-2	
Benzo(g,h,i)perylene	**17.0**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	207-08-9	
Chrysene	**35.8**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	218-01-9	
Dibenz(a,h)anthracene	**4.8**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	53-70-3	
Fluoranthene	**5.9**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	206-44-0	
Fluorene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	86-73-7	
Indeno(1,2,3-cd)pyrene	**5.0**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	193-39-5	
1-Methylnaphthalene	**5.7**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	90-12-0	
2-Methylnaphthalene	**10.4**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	91-57-6	
Naphthalene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	91-20-3	
Phenanthrene	**25.4**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	85-01-8	
Pyrene	**27.9**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 13:41	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	89	%	47-120	1	10/28/14 00:00	10/31/14 00:56	321-60-8	
Terphenyl-d14 (S)	98	%	42-127	1	10/28/14 00:00	10/31/14 00:56	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS2 **Lab ID: 60180688005** Collected: 10/17/14 11:00 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	106-46-7	
Diethylphthalate	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	105-67-9	
Dimethylphthalate	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	131-11-3	
Di-n-butylphthalate	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	1930	1	10/28/14 00:00	10/31/14 00:56	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56		
4-Nitrophenol	ND	ug/kg	1930	1	10/28/14 00:00	10/31/14 00:56	100-02-7	
Phenol	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	108-95-2	
Pyridine	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	110-86-1	
Quinoline	ND	ug/kg	381	1	10/28/14 00:00	10/31/14 00:56	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	82	%	15-155	1	10/28/14 00:00	10/31/14 00:56	4165-60-0	
2-Fluorobiphenyl (S)	89	%	20-159	1	10/28/14 00:00	10/31/14 00:56	321-60-8	
Terphenyl-d14 (S)	98	%	18-160	1	10/28/14 00:00	10/31/14 00:56	1718-51-0	
Phenol-d6 (S)	84	%	44-120	1	10/28/14 00:00	10/31/14 00:56	13127-88-3	
2-Fluorophenol (S)	83	%	38-120	1	10/28/14 00:00	10/31/14 00:56	367-12-4	
2,4,6-Tribromophenol (S)	90	%	36-120	1	10/28/14 00:00	10/31/14 00:56	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	0.94	1		10/30/14 14:44		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	423	1	10/23/14 15:24	10/31/14 16:46	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%.	30-150	1	10/23/14 15:24	10/31/14 16:46	17060-07-0	4e
Toluene-d8 (S)	103	%.	30-150	1	10/23/14 15:24	10/31/14 16:46	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	30-150	1	10/23/14 15:24	10/31/14 16:46	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	18.9	1		10/30/14 14:44	67-64-1	
Acrylonitrile	ND	ug/kg	94.4	1		10/30/14 14:44	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	4.7	1		10/30/14 14:44	994-05-8	
Benzene	ND	ug/kg	4.7	1		10/30/14 14:44	71-43-2	
Bromodichloromethane	ND	ug/kg	4.7	1		10/30/14 14:44	75-27-4	
2-Butanone (MEK)	ND	ug/kg	9.4	1		10/30/14 14:44	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	9.4	1		10/30/14 14:44	75-65-0	
n-Butylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	135-98-8	
Carbon disulfide	ND	ug/kg	4.7	1		10/30/14 14:44	75-15-0	
Chlorobenzene	ND	ug/kg	4.7	1		10/30/14 14:44	108-90-7	
Chloroethane	ND	ug/kg	4.7	1		10/30/14 14:44	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-166 SS2 **Lab ID: 60180688005** Collected: 10/17/14 11:00 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	4.7	1		10/30/14 14:44	67-66-3	
Chloromethane	ND	ug/kg	4.7	1		10/30/14 14:44	74-87-3	
Dibromochloromethane	ND	ug/kg	4.7	1		10/30/14 14:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.7	1		10/30/14 14:44	106-93-4	
Dibromomethane	ND	ug/kg	4.7	1		10/30/14 14:44	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	4.7	1		10/30/14 14:44	110-57-6	
1,1-Dichloroethane	ND	ug/kg	4.7	1		10/30/14 14:44	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.7	1		10/30/14 14:44	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.7	1		10/30/14 14:44	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.7	1		10/30/14 14:44	75-35-4	
1,2-Dichloropropane	ND	ug/kg	4.7	1		10/30/14 14:44	78-87-5	
Diisopropyl ether	ND	ug/kg	4.7	1		10/30/14 14:44	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	94.4	1		10/30/14 14:44	123-91-1	
Ethylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	4.7	1		10/30/14 14:44	637-92-3	
2-Hexanone	ND	ug/kg	18.9	1		10/30/14 14:44	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.7	1		10/30/14 14:44	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.7	1		10/30/14 14:44	99-87-6	
Methylene chloride	ND	ug/kg	4.7	1		10/30/14 14:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.4	1		10/30/14 14:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.7	1		10/30/14 14:44	1634-04-4	
n-Propylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	103-65-1	
Styrene	ND	ug/kg	4.7	1		10/30/14 14:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.7	1		10/30/14 14:44	79-34-5	
Tetrachloroethene	ND	ug/kg	4.7	1		10/30/14 14:44	127-18-4	
Toluene	ND	ug/kg	4.7	1		10/30/14 14:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.7	1		10/30/14 14:44	71-55-6	
Trichloroethene	ND	ug/kg	4.7	1		10/30/14 14:44	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.7	1		10/30/14 14:44	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.7	1		10/30/14 14:44	108-67-8	
Vinyl acetate	ND	ug/kg	9.4	1		10/30/14 14:44	108-05-4	
Vinyl chloride	ND	ug/kg	4.7	1		10/30/14 14:44	75-01-4	
Xylene (Total)	ND	ug/kg	4.7	1		10/30/14 14:44	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 14:44	2037-26-5	
4-Bromofluorobenzene (S)	102	%	76-123	1		10/30/14 14:44	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	75-129	1		10/30/14 14:44	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**13.4**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**8.1**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS1 **Lab ID: 60180688006** Collected: 10/17/14 12:20 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	68334-30-5	
Fuel Oil	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	68553-00-4	
Jet Fuel	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	94114-58-6	
Kerosene	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	8008-20-6	
Mineral Spirits	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	8030-30-6	
Motor Oil	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48	64742-65-0	
TEH as Diesel No.2	ND	mg/kg	13.1	1	10/28/14 00:00	10/30/14 20:48		
Surrogates								
n-Tetracosane (S)	79	%	46-147	1	10/28/14 00:00	10/30/14 20:48	646-31-1	
p-Terphenyl (S)	86	%	41-149	1	10/28/14 00:00	10/30/14 20:48	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**7.0**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:50	7440-38-2	
Barium	**189**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:50	7440-39-3	
Cadmium	ND	mg/kg	0.54	1	10/24/14 13:00	10/30/14 10:50	7440-43-9	
Chromium	**24.9**	mg/kg	0.54	1	10/24/14 13:00	10/30/14 10:50	7440-47-3	
Lead	**16.3**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:50	7439-92-1	
Selenium	ND	mg/kg	1.6	1	10/24/14 13:00	10/30/14 10:50	7782-49-2	
Silver	ND	mg/kg	0.75	1	10/24/14 13:00	10/30/14 10:50	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.060	1	10/22/14 09:00	10/22/14 13:50	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	208-96-8	
Anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	205-99-2	
Benzo(g,h,i)perylene	**4.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	207-08-9	
Chrysene	**4.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	53-70-3	
Fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	206-44-0	
Fluorene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	193-39-5	
1-Methylnaphthalene	**7.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	90-12-0	
2-Methylnaphthalene	**14.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	91-57-6	
Naphthalene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	91-20-3	
Phenanthrene	**15.1**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	85-01-8	
Pyrene	**5.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:00	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	95	%	47-120	1	10/28/14 00:00	10/31/14 01:17	321-60-8	
Terphenyl-d14 (S)	99	%	42-127	1	10/28/14 00:00	10/31/14 01:17	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS1 **Lab ID: 60180688006** Collected: 10/17/14 12:20 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	106-46-7	
Diethylphthalate	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	105-67-9	
Dimethylphthalate	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	131-11-3	
Di-n-butylphthalate	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2180	1	10/28/14 00:00	10/31/14 01:17	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17		
4-Nitrophenol	ND	ug/kg	2180	1	10/28/14 00:00	10/31/14 01:17	100-02-7	
Phenol	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	108-95-2	
Pyridine	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	110-86-1	
Quinoline	ND	ug/kg	431	1	10/28/14 00:00	10/31/14 01:17	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	90	%	15-155	1	10/28/14 00:00	10/31/14 01:17	4165-60-0	
2-Fluorobiphenyl (S)	95	%	20-159	1	10/28/14 00:00	10/31/14 01:17	321-60-8	
Terphenyl-d14 (S)	99	%	18-160	1	10/28/14 00:00	10/31/14 01:17	1718-51-0	
Phenol-d6 (S)	90	%	44-120	1	10/28/14 00:00	10/31/14 01:17	13127-88-3	
2-Fluorophenol (S)	91	%	38-120	1	10/28/14 00:00	10/31/14 01:17	367-12-4	
2,4,6-Tribromophenol (S)	90	%	36-120	1	10/28/14 00:00	10/31/14 01:17	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.1	1		10/30/14 14:59		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	511	1	10/23/14 15:24	11/03/14 22:05	64-17-5	H1
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%.	30-150	1	10/23/14 15:24	11/03/14 22:05	17060-07-0	3e,4e
Toluene-d8 (S)	99	%.	30-150	1	10/23/14 15:24	11/03/14 22:05	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	30-150	1	10/23/14 15:24	11/03/14 22:05	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	22.3	1		10/30/14 14:59	67-64-1	
Acrylonitrile	ND	ug/kg	112	1		10/30/14 14:59	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.6	1		10/30/14 14:59	994-05-8	
Benzene	ND	ug/kg	5.6	1		10/30/14 14:59	71-43-2	
Bromodichloromethane	ND	ug/kg	5.6	1		10/30/14 14:59	75-27-4	
2-Butanone (MEK)	ND	ug/kg	11.2	1		10/30/14 14:59	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	11.2	1		10/30/14 14:59	75-65-0	
n-Butylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	135-98-8	
Carbon disulfide	ND	ug/kg	5.6	1		10/30/14 14:59	75-15-0	
Chlorobenzene	ND	ug/kg	5.6	1		10/30/14 14:59	108-90-7	
Chloroethane	ND	ug/kg	5.6	1		10/30/14 14:59	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS1 **Lab ID: 60180688006** Collected: 10/17/14 12:20 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.6	1		10/30/14 14:59	67-66-3	
Chloromethane	ND	ug/kg	5.6	1		10/30/14 14:59	74-87-3	
Dibromochloromethane	ND	ug/kg	5.6	1		10/30/14 14:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.6	1		10/30/14 14:59	106-93-4	
Dibromomethane	ND	ug/kg	5.6	1		10/30/14 14:59	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.6	1		10/30/14 14:59	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.6	1		10/30/14 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.6	1		10/30/14 14:59	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.6	1		10/30/14 14:59	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.6	1		10/30/14 14:59	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.6	1		10/30/14 14:59	78-87-5	
Diisopropyl ether	ND	ug/kg	5.6	1		10/30/14 14:59	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	112	1		10/30/14 14:59	123-91-1	
Ethylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.6	1		10/30/14 14:59	637-92-3	
2-Hexanone	ND	ug/kg	22.3	1		10/30/14 14:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.6	1		10/30/14 14:59	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.6	1		10/30/14 14:59	99-87-6	
Methylene chloride	ND	ug/kg	5.6	1		10/30/14 14:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.2	1		10/30/14 14:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.6	1		10/30/14 14:59	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	103-65-1	
Styrene	ND	ug/kg	5.6	1		10/30/14 14:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.6	1		10/30/14 14:59	79-34-5	
Tetrachloroethene	ND	ug/kg	5.6	1		10/30/14 14:59	127-18-4	
Toluene	ND	ug/kg	5.6	1		10/30/14 14:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.6	1		10/30/14 14:59	71-55-6	
Trichloroethene	ND	ug/kg	5.6	1		10/30/14 14:59	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.6	1		10/30/14 14:59	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.6	1		10/30/14 14:59	108-67-8	
Vinyl acetate	ND	ug/kg	11.2	1		10/30/14 14:59	108-05-4	
Vinyl chloride	ND	ug/kg	5.6	1		10/30/14 14:59	75-01-4	
Xylene (Total)	ND	ug/kg	5.6	1		10/30/14 14:59	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 14:59	2037-26-5	
4-Bromofluorobenzene (S)	103	%	76-123	1		10/30/14 14:59	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	75-129	1		10/30/14 14:59	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**23.6**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS2 **Lab ID: 60180688007** Collected: 10/17/14 12:25 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	68334-30-5	
Fuel Oil	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	68553-00-4	
Jet Fuel	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	94114-58-6	
Kerosene	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	8008-20-6	
Mineral Spirits	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	8030-30-6	
Motor Oil	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56	64742-65-0	
TEH as Diesel No.2	ND	mg/kg	12.0	1	10/28/14 00:00	10/30/14 20:56		
Surrogates								
n-Tetracosane (S)	73	%	46-147	1	10/28/14 00:00	10/30/14 20:56	646-31-1	
p-Terphenyl (S)	80	%	41-149	1	10/28/14 00:00	10/30/14 20:56	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**3.7**	mg/kg	1.0	1	10/24/14 13:00	10/30/14 10:53	7440-38-2	
Barium	**139**	mg/kg	1.0	1	10/24/14 13:00	10/30/14 10:53	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	10/24/14 13:00	10/30/14 10:53	7440-43-9	
Chromium	**21.9**	mg/kg	0.50	1	10/24/14 13:00	10/30/14 10:53	7440-47-3	
Lead	**15.9**	mg/kg	1.0	1	10/24/14 13:00	10/30/14 10:53	7439-92-1	
Selenium	ND	mg/kg	1.5	1	10/24/14 13:00	10/30/14 10:53	7782-49-2	
Silver	ND	mg/kg	0.70	1	10/24/14 13:00	10/30/14 10:53	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.049	1	10/22/14 09:00	10/22/14 13:53	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	208-96-8	
Anthracene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	207-08-9	
Chrysene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	206-44-0	
Fluorene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	193-39-5	
1-Methylnaphthalene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	90-12-0	
2-Methylnaphthalene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	91-57-6	
Naphthalene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	91-20-3	
Phenanthrene	**4.6**	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	85-01-8	
Pyrene	ND	ug/kg	4.0	1	10/28/14 00:00	10/30/14 14:20	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	81	%	47-120	1	10/28/14 00:00	10/31/14 01:39	321-60-8	
Terphenyl-d14 (S)	91	%	42-127	1	10/28/14 00:00	10/31/14 01:39	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS2 **Lab ID: 60180688007** Collected: 10/17/14 12:25 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	106-46-7	
Diethylphthalate	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	105-67-9	
Dimethylphthalate	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	131-11-3	
Di-n-butylphthalate	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2000	1	10/28/14 00:00	10/31/14 01:39	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39		
4-Nitrophenol	ND	ug/kg	2000	1	10/28/14 00:00	10/31/14 01:39	100-02-7	
Phenol	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	108-95-2	
Pyridine	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	110-86-1	
Quinoline	ND	ug/kg	396	1	10/28/14 00:00	10/31/14 01:39	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	79	%	15-155	1	10/28/14 00:00	10/31/14 01:39	4165-60-0	
2-Fluorobiphenyl (S)	81	%	20-159	1	10/28/14 00:00	10/31/14 01:39	321-60-8	
Terphenyl-d14 (S)	91	%	18-160	1	10/28/14 00:00	10/31/14 01:39	1718-51-0	
Phenol-d6 (S)	79	%	44-120	1	10/28/14 00:00	10/31/14 01:39	13127-88-3	
2-Fluorophenol (S)	81	%	38-120	1	10/28/14 00:00	10/31/14 01:39	367-12-4	
2,4,6-Tribromophenol (S)	80	%	36-120	1	10/28/14 00:00	10/31/14 01:39	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.0	1		10/30/14 15:15		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	444	1	10/23/14 15:24	11/03/14 21:46	64-17-5	H1
Surrogates								
1,2-Dichloroethane-d4 (S)	120	%.	30-150	1	10/23/14 15:24	11/03/14 21:46	17060-07-0	3e
Toluene-d8 (S)	100	%.	30-150	1	10/23/14 15:24	11/03/14 21:46	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	30-150	1	10/23/14 15:24	11/03/14 21:46	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	20.0	1		10/30/14 15:15	67-64-1	
Acrylonitrile	ND	ug/kg	100	1		10/30/14 15:15	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.0	1		10/30/14 15:15	994-05-8	
Benzene	ND	ug/kg	5.0	1		10/30/14 15:15	71-43-2	
Bromodichloromethane	ND	ug/kg	5.0	1		10/30/14 15:15	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.0	1		10/30/14 15:15	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.0	1		10/30/14 15:15	75-65-0	
n-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	135-98-8	
Carbon disulfide	ND	ug/kg	5.0	1		10/30/14 15:15	75-15-0	
Chlorobenzene	ND	ug/kg	5.0	1		10/30/14 15:15	108-90-7	
Chloroethane	ND	ug/kg	5.0	1		10/30/14 15:15	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180688

Sample: MW-152 SS2 **Lab ID: 60180688007** Collected: 10/17/14 12:25 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.0	1		10/30/14 15:15	67-66-3	
Chloromethane	ND	ug/kg	5.0	1		10/30/14 15:15	74-87-3	
Dibromochloromethane	ND	ug/kg	5.0	1		10/30/14 15:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		10/30/14 15:15	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		10/30/14 15:15	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.0	1		10/30/14 15:15	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 15:15	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 15:15	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1		10/30/14 15:15	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	1		10/30/14 15:15	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.0	1		10/30/14 15:15	78-87-5	
Diisopropyl ether	ND	ug/kg	5.0	1		10/30/14 15:15	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	100	1		10/30/14 15:15	123-91-1	
Ethylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 15:15	637-92-3	
2-Hexanone	ND	ug/kg	20.0	1		10/30/14 15:15	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		10/30/14 15:15	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1		10/30/14 15:15	99-87-6	
Methylene chloride	ND	ug/kg	5.0	1		10/30/14 15:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.0	1		10/30/14 15:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 15:15	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	103-65-1	
Styrene	ND	ug/kg	5.0	1		10/30/14 15:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		10/30/14 15:15	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		10/30/14 15:15	127-18-4	
Toluene	ND	ug/kg	5.0	1		10/30/14 15:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		10/30/14 15:15	71-55-6	
Trichloroethene	ND	ug/kg	5.0	1		10/30/14 15:15	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		10/30/14 15:15	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 15:15	108-67-8	
Vinyl acetate	ND	ug/kg	10.0	1		10/30/14 15:15	108-05-4	
Vinyl chloride	ND	ug/kg	5.0	1		10/30/14 15:15	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1		10/30/14 15:15	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 15:15	2037-26-5	
4-Bromofluorobenzene (S)	102	%	76-123	1		10/30/14 15:15	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	75-129	1		10/30/14 15:15	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**17.0**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		11/03/14 13:00		H1

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MERP/8938 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1464677 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.050	10/22/14 13:33	

LABORATORY CONTROL SAMPLE: 1464678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.5	0.48	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1464679 1464680

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	.55	.51	0.52	0.47	93	90	75-125	8	20	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MPRP/29467 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1466778 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	10/30/14 09:59	
Barium	mg/kg	ND	1.0	10/30/14 09:59	
Cadmium	mg/kg	ND	0.50	10/30/14 09:59	
Chromium	mg/kg	ND	0.50	10/30/14 09:59	
Lead	mg/kg	ND	1.0	10/30/14 09:59	
Selenium	mg/kg	ND	1.5	10/30/14 09:59	
Silver	mg/kg	ND	0.70	10/30/14 09:59	

LABORATORY CONTROL SAMPLE: 1466779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	89.9	90	80-120	
Barium	mg/kg	100	93.6	94	80-120	
Cadmium	mg/kg	100	93.9	94	80-120	
Chromium	mg/kg	100	92.3	92	80-120	
Lead	mg/kg	100	95.7	96	80-120	
Selenium	mg/kg	100	89.7	90	80-120	
Silver	mg/kg	50	46.5	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1466780 1466781

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	3.9	96.9	101	78.7	81.8	77	77	75-125	4	20	
Barium	mg/kg	185	96.9	101	233	242	50	56	75-125	4	20	2e,M1
Cadmium	mg/kg	ND	96.9	101	79.7	83.2	82	82	75-125	4	20	
Chromium	mg/kg	15.6	96.9	101	98.9	99.2	86	82	75-125	0	20	
Lead	mg/kg	17.2	96.9	101	89.4	95.9	75	78	75-125	7	20	
Selenium	mg/kg	ND	96.9	101	74.6	77.1	77	76	75-125	3	20	
Silver	mg/kg	ND	48.4	50.8	41.3	43.4	85	85	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MSV/65434 Analysis Method: OA1
QC Batch Method: OA1 Analysis Description: OA1 Volatile Pet. Hydrocarbon
Associated Lab Samples: 60180688001, 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1470036 Matrix: Solid
Associated Lab Samples: 60180688001, 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	1.0	10/30/14 13:12	

LABORATORY CONTROL SAMPLE: 1470037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	4	4.0	101	63-124	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MSV/29163 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005

METHOD BLANK: 1831982 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	ug/kg	ND	400	10/31/14 13:58	SS
1,2-Dichloroethane-d4 (S)	%.	119	30-150	10/31/14 13:58	
4-Bromofluorobenzene (S)	%.	105	30-150	10/31/14 13:58	
Toluene-d8 (S)	%.	99	30-150	10/31/14 13:58	

LABORATORY CONTROL SAMPLE & LCSD: 1831983 1831984

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ug/kg	400	335J	341J	84	85	75-132		20	SS
1,2-Dichloroethane-d4 (S)	%.				112	112	30-150			
4-Bromofluorobenzene (S)	%.				103	102	30-150			
Toluene-d8 (S)	%.				103	102	30-150			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MSV/29193 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 60180688006, 60180688007

METHOD BLANK: 1834721 | Matrix: Solid
Associated Lab Samples: 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	ug/kg	ND	400	11/03/14 21:27	
1,2-Dichloroethane-d4 (S)	%.	113	30-150	11/03/14 21:27	
4-Bromofluorobenzene (S)	%.	101	30-150	11/03/14 21:27	
Toluene-d8 (S)	%.	102	30-150	11/03/14 21:27	

LABORATORY CONTROL SAMPLE: 1834722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethanol	ug/kg	1000	758	76	75-132	
1,2-Dichloroethane-d4 (S)	%.			55	30-150	
4-Bromofluorobenzene (S)	%.			52	30-150	
Toluene-d8 (S)	%.			51	30-150	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: MSV/65433 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 60180688001, 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1470033 Matrix: Solid
Associated Lab Samples: 60180688001, 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1-Dichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1-Dichloroethene	ug/kg	ND	5.0	10/30/14 13:12	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloropropane	ug/kg	ND	5.0	10/30/14 13:12	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	100	10/30/14 13:12	
2-Butanone (MEK)	ug/kg	ND	10.0	10/30/14 13:12	
2-Hexanone	ug/kg	ND	20.0	10/30/14 13:12	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	10/30/14 13:12	
Acetone	ug/kg	ND	20.0	10/30/14 13:12	
Acrylonitrile	ug/kg	ND	100	10/30/14 13:12	
Benzene	ug/kg	ND	5.0	10/30/14 13:12	
Bromodichloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Carbon disulfide	ug/kg	ND	5.0	10/30/14 13:12	
Chlorobenzene	ug/kg	ND	5.0	10/30/14 13:12	
Chloroethane	ug/kg	ND	5.0	10/30/14 13:12	
Chloroform	ug/kg	ND	5.0	10/30/14 13:12	
Chloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Dibromochloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Dibromomethane	ug/kg	ND	5.0	10/30/14 13:12	
Diisopropyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Ethyl-tert-butyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Ethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	10/30/14 13:12	
Methyl-tert-butyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Methylene chloride	ug/kg	ND	5.0	10/30/14 13:12	
n-Butylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
n-Propylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
p-Isopropyltoluene	ug/kg	ND	5.0	10/30/14 13:12	
sec-Butylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
Styrene	ug/kg	ND	5.0	10/30/14 13:12	
tert-Amylmethyl ether	ug/kg	ND	5.0	10/30/14 13:12	
tert-Butyl Alcohol	ug/kg	ND	10.0	10/30/14 13:12	
Tetrachloroethene	ug/kg	ND	5.0	10/30/14 13:12	
Toluene	ug/kg	ND	5.0	10/30/14 13:12	
trans-1,4-Dichloro-2-butene	ug/kg	ND	5.0	10/30/14 13:12	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

METHOD BLANK: 1470033 Matrix: Solid
Associated Lab Samples: 60180688001, 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/kg	ND	5.0	10/30/14 13:12	
Trichlorofluoromethane	ug/kg	ND	5.0	10/30/14 13:12	
Vinyl acetate	ug/kg	ND	10.0	10/30/14 13:12	
Vinyl chloride	ug/kg	ND	5.0	10/30/14 13:12	
Xylene (Total)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethane-d4 (S)	%	100	75-129	10/30/14 13:12	
4-Bromofluorobenzene (S)	%	99	76-123	10/30/14 13:12	
Toluene-d8 (S)	%	99	80-120	10/30/14 13:12	

LABORATORY CONTROL SAMPLE: 1470034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	94.8	95	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	89.8	90	73-120	
1,1-Dichloroethane	ug/kg	100	94.3	94	71-120	
1,1-Dichloroethene	ug/kg	100	100	100	76-130	
1,2,4-Trimethylbenzene	ug/kg	100	90.4	90	78-120	
1,2-Dibromoethane (EDB)	ug/kg	100	98.7	99	80-121	
1,2-Dichloroethane	ug/kg	100	92.1	92	78-120	
1,2-Dichloroethene (Total)	ug/kg	200	191	95	79-121	
1,2-Dichloropropane	ug/kg	100	96.1	96	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	91.8	92	78-120	
1,4-Dioxane (p-Dioxane)	ug/kg	500	449	90	70-130	
2-Butanone (MEK)	ug/kg	500	455	91	55-135	
2-Hexanone	ug/kg	500	461	92	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	467	93	71-128	
Acetone	ug/kg	500	520	104	43-144	
Acrylonitrile	ug/kg	1000	943	94	71-120	
Benzene	ug/kg	100	92.9	93	80-120	
Bromodichloromethane	ug/kg	100	96.5	97	80-120	
Carbon disulfide	ug/kg	100	101	101	58-137	
Chlorobenzene	ug/kg	100	93.9	94	80-120	
Chloroethane	ug/kg	100	108	108	65-127	
Chloroform	ug/kg	100	93.8	94	74-120	
Chloromethane	ug/kg	100	107	107	39-138	
Dibromochloromethane	ug/kg	100	96.8	97	80-124	
Dibromomethane	ug/kg	100	97.6	98	80-120	
Diisopropyl ether	ug/kg	100	94.3	94	68-120	
Ethyl-tert-butyl ether	ug/kg	100	95.5	95	72-120	
Ethylbenzene	ug/kg	100	93.0	93	80-120	
Isopropylbenzene (Cumene)	ug/kg	100	93.7	94	80-136	
Methyl-tert-butyl ether	ug/kg	100	94.4	94	78-121	
Methylene chloride	ug/kg	100	103	103	70-123	
n-Butylbenzene	ug/kg	100	93.3	93	72-132	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

LABORATORY CONTROL SAMPLE: 1470034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/kg	100	90.7	91	72-127	
p-Isopropyltoluene	ug/kg	100	91.8	92	78-128	
sec-Butylbenzene	ug/kg	100	91.8	92	73-134	
Styrene	ug/kg	100	96.5	97	79-120	
tert-Amylmethyl ether	ug/kg	100	94.3	94	77-120	
tert-Butyl Alcohol	ug/kg	500	483	97	58-126	
Tetrachloroethene	ug/kg	100	95.4	95	78-128	
Toluene	ug/kg	100	93.1	93	79-120	
trans-1,4-Dichloro-2-butene	ug/kg	100	91.9	92	70-130	
Trichloroethene	ug/kg	100	94.7	95	80-120	
Trichlorofluoromethane	ug/kg	100	103	103	64-126	
Vinyl acetate	ug/kg	100	88.1	88	70-130	
Vinyl chloride	ug/kg	100	107	107	57-132	
Xylene (Total)	ug/kg	300	279	93	79-120	
1,2-Dichloroethane-d4 (S)	%			99	75-129	
4-Bromofluorobenzene (S)	%			100	76-123	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: OEXT/46866 | Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 | Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1468599 | Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND	3.2	10/30/14 11:24	
2-Methylnaphthalene	ug/kg	ND	3.2	10/30/14 11:24	
Acenaphthene	ug/kg	ND	3.2	10/30/14 11:24	
Acenaphthylene	ug/kg	ND	3.2	10/30/14 11:24	
Anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(a)anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(a)pyrene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(b)fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(k)fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Chrysene	ug/kg	ND	3.2	10/30/14 11:24	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Fluorene	ug/kg	ND	3.2	10/30/14 11:24	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	10/30/14 11:24	
Naphthalene	ug/kg	ND	3.2	10/30/14 11:24	
Phenanthrene	ug/kg	ND	3.2	10/30/14 11:24	
Pyrene	ug/kg	ND	3.2	10/30/14 11:24	
2-Fluorobiphenyl (S)	%	86	47-120	10/30/14 22:26	
Terphenyl-d14 (S)	%	92	42-127	10/30/14 22:26	

LABORATORY CONTROL SAMPLE: 1468600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	32.8	30.2	92	57-120	
2-Methylnaphthalene	ug/kg	32.8	30.4	93	59-120	
Acenaphthene	ug/kg	32.8	29.7	91	58-120	
Acenaphthylene	ug/kg	32.8	30.4	93	56-120	
Anthracene	ug/kg	32.8	29.4	89	52-120	
Benzo(a)anthracene	ug/kg	32.8	30.3	92	56-120	
Benzo(a)pyrene	ug/kg	32.8	29.5	90	52-120	
Benzo(b)fluoranthene	ug/kg	32.8	29.9	91	54-124	
Benzo(g,h,i)perylene	ug/kg	32.8	31.0	95	47-123	
Benzo(k)fluoranthene	ug/kg	32.8	30.7	93	53-126	
Chrysene	ug/kg	32.8	29.7	90	47-120	
Dibenz(a,h)anthracene	ug/kg	32.8	29.4	89	46-126	
Fluoranthene	ug/kg	32.8	28.5	87	55-120	
Fluorene	ug/kg	32.8	31.2	95	58-120	
Indeno(1,2,3-cd)pyrene	ug/kg	32.8	30.4	93	47-123	
Naphthalene	ug/kg	32.8	30.2	92	60-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

LABORATORY CONTROL SAMPLE: 1468600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	32.8	29.7	91	57-120	
Pyrene	ug/kg	32.8	32.8	100	57-123	
2-Fluorobiphenyl (S)	%			85	47-120	
Terphenyl-d14 (S)	%			102	42-127	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468601 1468602

Parameter	Units	60180689002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	25.3	41.8	42.6	49.2	47.6	57	52	57-120	3	30	M1
2-Methylnaphthalene	ug/kg	48.0	41.8	42.6	61.1	61.1	31	31	25-152	0	30	
Acenaphthene	ug/kg	7.5	41.8	42.6	41.2	40.1	81	77	14-147	3	41	
Acenaphthylene	ug/kg	6.7	41.8	42.6	41.0	38.8	82	76	17-144	5	47	
Anthracene	ug/kg	14.4	41.8	42.6	38.0	36.6	56	52	10-151	4	49	
Benzo(a)anthracene	ug/kg	ND	41.8	42.6	27.9	18.3	58	34	19-153	42	49	
Benzo(a)pyrene	ug/kg	ND	41.8	42.6	19.9	11.4	43	22	10-143	55	49	R1
Benzo(b)fluoranthene	ug/kg	4.4	41.8	42.6	27.1	18.3	54	33	10-153	38	49	
Benzo(g,h,i)perylene	ug/kg	ND	41.8	42.6	16.4	8.4	39	20	10-149	65	49	R1
Benzo(k)fluoranthene	ug/kg	ND	41.8	42.6	21.9	13.3	47	26	24-153	49	49	
Chrysene	ug/kg	7.0	41.8	42.6	30.1	21.0	55	33	10-153	36	48	
Dibenz(a,h)anthracene	ug/kg	ND	41.8	42.6	14.8	7.1	35	17	10-153	71	46	R1
Fluoranthene	ug/kg	32.5	41.8	42.6	55.1	55.1	54	53	14-153	0	50	
Fluorene	ug/kg	15.9	41.8	42.6	46.4	47.4	73	74	16-149	2	44	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	41.8	42.6	15.2	7.4	36	17	10-155	69	48	R1
Naphthalene	ug/kg	113	41.8	42.6	87.6	88.7	-60	-56	11-151	1	49	M1
Phenanthrene	ug/kg	78.3	41.8	42.6	76.8	99.4	-4	50	10-159	26	48	M1
Pyrene	ug/kg	24.4	41.8	42.6	49.8	44.4	61	47	13-150	12	47	
2-Fluorobiphenyl (S)	%						82	149	47-120			S0
Terphenyl-d14 (S)	%						75	59	42-127			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: OEXT/46865 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1468595 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
1,3-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
1,4-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
2,4-Dimethylphenol	ug/kg	ND	322	10/30/14 22:26	
2,4-Dinitrophenol	ug/kg	ND	1630	10/30/14 22:26	
2-Methylphenol(o-Cresol)	ug/kg	ND	322	10/30/14 22:26	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	322	10/30/14 22:26	
4-Nitrophenol	ug/kg	ND	1630	10/30/14 22:26	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	322	10/30/14 22:26	
Di-n-butylphthalate	ug/kg	ND	322	10/30/14 22:26	
Diethylphthalate	ug/kg	ND	322	10/30/14 22:26	
Dimethylphthalate	ug/kg	ND	322	10/30/14 22:26	
Phenol	ug/kg	ND	322	10/30/14 22:26	
Pyridine	ug/kg	ND	322	10/30/14 22:26	
Quinoline	ug/kg	ND	322	10/30/14 22:26	
2,4,6-Tribromophenol (S)	%	77	36-120	10/30/14 22:26	
2-Fluorobiphenyl (S)	%	86	20-159	10/30/14 22:26	
2-Fluorophenol (S)	%	82	38-120	10/30/14 22:26	
Nitrobenzene-d5 (S)	%	82	15-155	10/30/14 22:26	
Phenol-d6 (S)	%	80	44-120	10/30/14 22:26	
Terphenyl-d14 (S)	%	92	18-160	10/30/14 22:26	

LABORATORY CONTROL SAMPLE: 1468596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/kg	1650	1390	84	56-120	
1,3-Dichlorobenzene	ug/kg	1650	1360	83	55-120	
1,4-Dichlorobenzene	ug/kg	1650	1380	84	54-120	
2,4-Dimethylphenol	ug/kg	1650	967	59	35-120	
2,4-Dinitrophenol	ug/kg	1650	1130J	69	10-120	
2-Methylphenol(o-Cresol)	ug/kg	1650	1400	85	53-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1650	1440	87	55-120	
4-Nitrophenol	ug/kg	1650	1350J	82	54-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1650	1520	92	59-120	
Di-n-butylphthalate	ug/kg	1650	1490	90	59-120	
Diethylphthalate	ug/kg	1650	1450	88	58-120	
Dimethylphthalate	ug/kg	1650	1460	88	59-120	
Phenol	ug/kg	1650	1430	87	56-120	
Pyridine	ug/kg	1650	814	49	25-120	
Quinoline	ug/kg	1650	1220	74	50-150	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

LABORATORY CONTROL SAMPLE: 1468596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Tribromophenol (S)	%			91	36-120	
2-Fluorobiphenyl (S)	%			91	20-159	
2-Fluorophenol (S)	%			88	38-120	
Nitrobenzene-d5 (S)	%			90	15-155	
Phenol-d6 (S)	%			90	44-120	
Terphenyl-d14 (S)	%			95	18-160	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468597 1468598

Parameter	Units	60180688003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichlorobenzene	ug/kg	ND	2000	2020	1630	1600	82	79	42-120	2	29	
1,3-Dichlorobenzene	ug/kg	ND	2000	2020	1590	1560	80	77	42-120	2	29	
1,4-Dichlorobenzene	ug/kg	ND	2000	2020	1620	1570	81	78	42-120	3	30	
2,4-Dimethylphenol	ug/kg	ND	2000	2020	1710	1630	85	81	21-121	5	33	
2,4-Dinitrophenol	ug/kg	ND	2000	2020	ND	ND	0	0	10-120		35	M1
2-Methylphenol(o-Cresol)	ug/kg	ND	2000	2020	1670	1660	84	82	37-120	1	32	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	2000	2020	1680	1670	84	82	37-120	1	33	
4-Nitrophenol	ug/kg	ND	2000	2020	1560J	1460J	78	72	23-127		30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	2000	2020	1870	1840	94	91	42-127	2	32	
Di-n-butylphthalate	ug/kg	ND	2000	2020	1770	1780	88	88	41-120	1	33	
Diethylphthalate	ug/kg	ND	2000	2020	1700	1630	85	81	43-120	4	29	
Dimethylphthalate	ug/kg	ND	2000	2020	1720	1640	86	81	34-120	5	29	
Phenol	ug/kg	ND	2000	2020	1680	1640	84	81	38-120	3	31	
Pyridine	ug/kg	ND	2000	2020	997	969	50	48	10-120	3	29	
Quinoline	ug/kg	ND	2000	2020	1530	1450	77	72	50-150	5	30	
2,4,6-Tribromophenol (S)	%						88	82	36-120			
2-Fluorobiphenyl (S)	%						88	83	20-159			
2-Fluorophenol (S)	%						82	81	38-120			
Nitrobenzene-d5 (S)	%						72	68	15-155			
Phenol-d6 (S)	%						83	82	44-120			
Terphenyl-d14 (S)	%						93	91	18-160			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: OEXT/46864 Analysis Method: OA2
QC Batch Method: EPA 3546 Analysis Description: OA2 GCS
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1468589 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel	mg/kg	ND	9.8	10/30/14 19:33	
Fuel Oil	mg/kg	ND	9.8	10/30/14 19:33	
Jet Fuel	mg/kg	ND	9.8	10/30/14 19:33	
Kerosene	mg/kg	ND	9.8	10/30/14 19:33	
Mineral Spirits	mg/kg	ND	9.8	10/30/14 19:33	
Motor Oil	mg/kg	ND	9.8	10/30/14 19:33	
TEH as Diesel No.2	mg/kg	ND	9.8	10/30/14 19:33	
n-Tetracosane (S)	%	75	46-147	10/30/14 19:33	
p-Terphenyl (S)	%	85	41-149	10/30/14 19:33	

LABORATORY CONTROL SAMPLE: 1468590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel	mg/kg	81.9	82.0	100	73-131	
n-Tetracosane (S)	%			82	46-147	
p-Terphenyl (S)	%			90	41-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468591 1468592

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Fuel	mg/kg	ND	107	104	340	223	318	214	60-140	42	32	M1,R1
n-Tetracosane (S)	%						98	70	46-147			
p-Terphenyl (S)	%						98	73	41-149			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: PMST/10164 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

METHOD BLANK: 1468609 Matrix: Solid
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	10/28/14 00:00	

SAMPLE DUPLICATE: 1468610

Parameter	Units	60180770001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.4	20.3	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180688

QC Batch: WET/51317 Analysis Method: EPA 9045
QC Batch Method: EPA 9045 Analysis Description: 9045 pH
Associated Lab Samples: 60180688002, 60180688003, 60180688004, 60180688005, 60180688006, 60180688007

SAMPLE DUPLICATE: 1472106

Parameter	Units	60180689006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.7	0	3	H3

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: KDHE NEODESHA
Pace Project No.: 60180688

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.

PQL - Practical Quantitation Limit.

RL - Reporting 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

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City
PASI-M	Pace Analytical Services - Minneapolis

WORKORDER QUALIFIERS

WO: 60180688

[1] All samples in the work-order were received in the lab within acceptable holding time by method 8260-Ethanol. Due to laboratory error, samples 60180688006 and 60180688007 were not transposed into the analytical process in our internal Laboratory Management System. The mechanism for tracking samples failed and both samples were not loaded on the instrument before hold time expired.

BATCH QUALIFIERS

Batch: MSV/29163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/29193

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65433

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65434

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALIFIERS

Project: KDHE NEODESHA
Pace Project No.: 60180688

ANALYTE QUALIFIERS

1e	Data for Ethanol by 8260 is reported after an initial calibration verification with low recovery. Sample was re-analyzed outside of hold under compliant QC conditions and the data has been confirmed.
2e	Post Digestion Spike Performed - 87% Recovery
3e	Sample container did not meet EPA or method requirements, and was not frozen within 48 hours of collection.
4e	Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.
5e	The sample does not match a profile of laboratory standards. Hydrocarbon fractions are present from the mid diesel fuel to late motor oil range. Quantitation achieved using diesel fuel as a reference standard.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H1	Analysis conducted outside the EPA method holding time.
H1	Analysis conducted outside the recognized method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60180688002	**MW-170 SS1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688003	**MW-170 SS2**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688004	**MW-166 SS1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688005	**MW-166 SS2**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688006	**MW-152 SS1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688007	**MW-152 SS2**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180688002	**MW-170 SS1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688003	**MW-170 SS2**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688004	**MW-166 SS1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688005	**MW-166 SS2**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688006	**MW-152 SS1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688007	**MW-152 SS2**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180688002	**MW-170 SS1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688003	**MW-170 SS2**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688004	**MW-166 SS1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688005	**MW-166 SS2**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688006	**MW-152 SS1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688007	**MW-152 SS2**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180688002	**MW-170 SS1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688003	**MW-170 SS2**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688004	**MW-166 SS1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688005	**MW-166 SS2**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688006	**MW-152 SS1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688007	**MW-152 SS2**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180688002	**MW-170 SS1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688003	**MW-170 SS2**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688004	**MW-166 SS1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688005	**MW-166 SS2**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688006	**MW-152 SS1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688007	**MW-152 SS2**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180688001	**TB10172014A**	OA1	MSV/65434		
60180688002	**MW-170 SS1**	OA1	MSV/65434		
60180688003	**MW-170 SS2**	OA1	MSV/65434		
60180688004	**MW-166 SS1**	OA1	MSV/65434		
60180688005	**MW-166 SS2**	OA1	MSV/65434		
60180688006	**MW-152 SS1**	OA1	MSV/65434		
60180688007	**MW-152 SS2**	OA1	MSV/65434		
60180688002	**MW-170 SS1**	EPA 5035A	MSV/29049	EPA 8260	MSV/29163
60180688003	**MW-170 SS2**	EPA 5035A	MSV/29049	EPA 8260	MSV/29163
60180688004	**MW-166 SS1**	EPA 5035A	MSV/29049	EPA 8260	MSV/29163
60180688005	**MW-166 SS2**	EPA 5035A	MSV/29049	EPA 8260	MSV/29163
60180688006	**MW-152 SS1**	EPA 5035A	MSV/29049	EPA 8260	MSV/29193
60180688007	**MW-152 SS2**	EPA 5035A	MSV/29049	EPA 8260	MSV/29193
60180688001	**TB10172014A**	EPA 8260	MSV/65433		
60180688002	**MW-170 SS1**	EPA 8260	MSV/65433		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KDHE NEODESHA
Pace Project No.: 60180688

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60180688003	**MW-170 SS2**	EPA 8260	MSV/65433		
60180688004	**MW-166 SS1**	EPA 8260	MSV/65433		
60180688005	**MW-166 SS2**	EPA 8260	MSV/65433		
60180688006	**MW-152 SS1**	EPA 8260	MSV/65433		
60180688007	**MW-152 SS2**	EPA 8260	MSV/65433		
60180688002	**MW-170 SS1**	ASTM D2974	PMST/10164		
60180688003	**MW-170 SS2**	ASTM D2974	PMST/10164		
60180688004	**MW-166 SS1**	ASTM D2974	PMST/10164		
60180688005	**MW-166 SS2**	ASTM D2974	PMST/10164		
60180688006	**MW-152 SS1**	ASTM D2974	PMST/10164		
60180688007	**MW-152 SS2**	ASTM D2974	PMST/10164		
60180688002	**MW-170 SS1**	EPA 9045	WET/51317		
60180688003	**MW-170 SS2**	EPA 9045	WET/51317		
60180688004	**MW-166 SS1**	EPA 9045	WET/51317		
60180688005	**MW-166 SS2**	EPA 9045	WET/51317		
60180688006	**MW-152 SS1**	EPA 9045	WET/51317		
60180688007	**MW-152 SS2**	EPA 9045	WET/51317		

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Sample Condition Upon Receipt

WO#: 60180688

60180688

Optional
Proj Due Date:
Proj Name:

Client Name: Bim

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

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☑ None ☐ Other ☑ ZPK

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: _____

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. KHS
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☑Yes ☐No ☐N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: SL	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): 072814-3	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☑No ☐N/A	17. List State: KS

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Volume not received for MS/MSD-8260

Project Manager Review: AAF for AKB Date: 10/18/14

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1721657

Section A Required Client Information:

Company: Burns & McDonnell
Address: 9400 Ward Parkway
KC, MO 64114
Email To: Trevor Gustafson
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Trevor Gustafson
Copy To: Chris Hoglund
Purchase Order No.:
Project Name: KDHE Needesha
Project Number: 80435

Section C Invoice Information:

Attention: Trevor Gustafson
Company Name: BMcD
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: KS

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): pH, RCRA 8	OA2, PAH, SVOC	VOC 8260	Oxy5, OA1	Ethanol	Moisture					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB 10172014 A	WT	G			10/17/14	0850		2				2							X				2VG94					01
2	MW-170 SS1	SL	G				0835		7	5		1WGKm			1	1		X	X	X	X	X	X			1BGBm	1BG98	1BPBu 1WGFu	02
3	MW-170 SS2	SL					0925		7	5					1	1		X	X	X	X	X	X						03
4	MW-166 SS1	SL	G				1040		7	5					1	1		X	X	X	X	X	X						04
5	MW-166 SS2	SL					1100		7	5					1	1		X	X	X	X	X	X						05
6	MW-152 SS1	SL	G				1220		7	5					1	1		X	X	X	X	X	X						06
7	MW-152 SS2	SL					1225		7	5					1	1		X	X	X	X	X	X						07
8																													
9																													
10																													
11																													
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	CL Hoglund	10/18/14	0940	[signature]	10/18	0940	2.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CHRIS HOGLUND
SIGNATURE of SAMPLER: CL Hoglund
DATE Signed (MM/DD/YY): 10/18/14

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Chain of Custody

10286255

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Workorder: 60180688 **Workorder Name:** KDHE NEODESHA **Owner Received Date:** 10/18/2014 **Results Requested By:** 11/3/2014

Report To	Subcontract To
Angie Brown Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665 Fax (913)599-1759	Pace Analytical Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414 Phone (612)607-1700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: none	Requested Analysis: Ethanol EPA 8260	LAB USE ONLY
1	MW-1 70 SS1	PS	10/17/2014 08:55	60180688002	Solid	1	X	001
2	MW-1 70 SS2	PS	10/17/2014 09:25	60180688003	Solid	1	X	002
3	MW-1 66 SS1	PS	10/17/2014 10:40	60180688004	Solid	1	X	003
4	MW-166 SS2	PS	10/17/2014 11:00	60180688005	Solid	1	X	004
5	MW-1 52 SS1	PS	10/17/2014 12:20	60180688006	Solid	1	X	005
6	MW-1 52 SS2	PS	10/1 7/2014 12:25	60180688007	Solid	1	X	006

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	10/22/14 1700	[illegible] PAEF	10-23-14 9:45
2				
3				

Comments

Cooler Temperature on Receipt 0.9 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: F-MN-L-213-rev.09	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace KS

Project #: WO# : 10286255

10286255

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

Tracking Number: 6113 5282 3594

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: _____ **Temp Blank?** ☒ Yes ☐ No

Thermom. Used: ☐ 98BA91305154 13 ☐ 98BA91216750 4 ☒ 98BA91325214 91 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.7 **Cooler Temp Corrected (°C):** 0.5 **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.2 **Date and Initials of Person Examining Contents:** 10-23-14 AG

					Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.	
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.	
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.	
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	4.	
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.	
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.	
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.	
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.	
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.	
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A		
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.	
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☐ N/A	11.	
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: SL					
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	13.	☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A		
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐ Yes	☒ No		Initial when completed:	Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☐ N/A	14.	
Trip Blank Present?	☐ Yes	☐ No	☐ N/A	15.	
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A		
Pace Trip Blank Lot # (if purchased): _____					

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: [signature] **Date:** Oct 23 2014

Note: Whenever there is a discrepant/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)

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688001 Client Smp ID: TB10172014A
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 13:27

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	34.8	J

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688002 Client Smp ID: MW-170 SS1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 13:58

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	358	_J__
2.	Unknown	1.417	19.1	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688003 Client Smp ID: MW-170 SS2
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 14:13

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	251	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688004 Client Smp ID: MW-166 SS1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 14:29

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	85.3	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688005 Client Smp ID: MW-166 SS2
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 14:44

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	245	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688006 Client Smp ID: MW-152 SS1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 14:59

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	293	J
2.	Unknown	1.417	13.8	J

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180688007 Client Smp ID: MW-152 SS2
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 15:15

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	148	J
2.	Unknown	1.452	13.7	J

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November 07, 2014

Trevor Gustafson
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114

RE: Project: KDHE NEODESHA
Pace Project No.: 60180689

Dear Trevor Gustafson:
Enclosed are the analytical results for sample(s) received by the laboratory on October 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Angie Brown
Angie.Brown@pacelabs.com
Project Manager

Enclosures

cc: TREVOR GUSTAFSON, BURNS & MCDONNELL

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CERTIFICATIONS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021

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SAMPLE SUMMARY

Project: KDHE NEODESHA
Pace Project No.: 60180689

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60180689001	**TB10172014B**	Solid	10/17/14 08:50	10/18/14 09:40
60180689002	**MW-148 SS1**	Solid	10/17/14 14:40	10/18/14 09:40
60180689003	**MW-148 SS2**	Solid	10/17/14 14:55	10/18/14 09:40
60180689004	**MW-171 SS1**	Solid	10/17/14 16:45	10/18/14 09:40
60180689005	**MW-171 SS2**	Solid	10/17/14 16:55	10/18/14 09:40
60180689006	**DUP-1**	Solid	10/17/14 08:00	10/18/14 09:40

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SAMPLE ANALYTE COUNT

Project: KDHE NEODESHA
Pace Project No.: 60180689

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60180689001	**TB10172014B**	OA1	JKL	1	PASI-K
		EPA 8260	JKL	49	PASI-K
60180689002	**MW-148 SS1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180689003	**MW-148 SS2**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180689004	**MW-171 SS1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180689005	**MW-171 SS2**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K

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SAMPLE ANALYTE COUNT

Project: KDHE NEODESHA
Pace Project No.: 60180689

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K
60180689006	**DUP-1**	OA2	JDE	9	PASI-K
		EPA 6010	JGP	7	PASI-K
		EPA 7471	ZBM	1	PASI-K
		EPA 8270 by SIM	JMT, NAW	20	PASI-K
		EPA 8270	JMT	21	PASI-K
		OA1	JKL	1	PASI-K
		EPA 8260	SH2	4	PASI-M
		EPA 8260	JKL	49	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9045	ESM	1	PASI-K

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Date: November 07, 2014

A library scan was performed for the volatiles method EPA 8260 and the Tentatively Identified Compound reports are included per each sample. The compound Isopropanol was not identified in the search.

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **OA2**
Description: OA2 GCS
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for OA2. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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.

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, where applicable, 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: OEXT/46864

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468591)
  - Diesel Fuel
- MSD (Lab ID: 1468592)
  - Diesel Fuel

R1: RPD value was outside control limits.

- MSD (Lab ID: 1468592)
  - Diesel Fuel

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **OA2**
Description: OA2 GCS
Client: Burns and McDonnell_BP
Date: November 07, 2014

Analyte Comments:

QC Batch: OEXT/46864

5e: The sample does not match a profile of laboratory standards. Hydrocarbon fractions are present from the mid diesel fuel to late motor oil range. Quantitation achieved using diesel fuel as a reference standard.

- DUP-1 (Lab ID: 60180689006)
  - TEH as Diesel No.2
- MW-148 SS1 (Lab ID: 60180689002)
  - TEH as Diesel No.2
- MW-148 SS2 (Lab ID: 60180689003)
  - TEH as Diesel No.2
- MW-171 SS1 (Lab ID: 60180689004)
  - TEH as Diesel No.2
- MW-171 SS2 (Lab ID: 60180689005)
  - TEH as Diesel No.2

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 6010**
Description: 6010 MET ICP Red. Interference
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 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.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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: MPRP/29467

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1466780)
  - Barium
- MSD (Lab ID: 1466781)
  - Barium

Additional Comments:

Analyte Comments:

QC Batch: MPRP/29467

2e: Post Digestion Spike Performed - 87% Recovery

- MS (Lab ID: 1466780)
  - Barium
- MSD (Lab ID: 1466781)
  - Barium

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 7471**
Description: 7471 Mercury
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for EPA 7471. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 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.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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.

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for EPA 8270 by SIM. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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: OEXT/46866

S0: Surrogate recovery outside laboratory control limits.

- MSD (Lab ID: 1468602)
  - 2-Fluorobiphenyl (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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: OEXT/46866

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180689002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468601)
  - Naphthalene
  - Phenanthrene
- MSD (Lab ID: 1468602)
  - 1-Methylnaphthalene
  - Naphthalene

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: Burns and McDonnell_BP
Date: November 07, 2014

QC Batch: OEXT/46866

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180689002

R1: RPD value was outside control limits.

- MSD (Lab ID: 1468602)
  - Benzo(a)pyrene
  - Benzo(g,h,i)perylene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8270**
Description: 8270 MSSV Semivolatiles
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for EPA 8270. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 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, where applicable, 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: OEXT/46865

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60180688003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1468597)
  - 2,4-Dinitrophenol
- MSD (Lab ID: 1468598)
  - 2,4-Dinitrophenol

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **OA1**
Description: OA1 Volatile Pet. Hydrocarbons
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 samples were analyzed for OA1. 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, where applicable, 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/65434

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

QC Batch: MSV/65456

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

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8260**
Description: 8260 MSV 5035 Low Level
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 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.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: MSV/29163

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- BLANK (Lab ID: 1831982)
  - Ethanol
- LCS (Lab ID: 1831983)
  - Ethanol
- LCSD (Lab ID: 1831984)
  - Ethanol

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, where applicable, 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/29098

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

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8260**
Description: 8260 MSV 5035 Low Level
Client: Burns and McDonnell_BP
Date: November 07, 2014

Analyte Comments:

QC Batch: MSV/29098

1e: Data for Ethanol by 8260 is reported after an initial calibration verification with low recovery. Sample was re-analyzed outside of hold under compliant QC conditions and the data has been confirmed.

- DUP-1 (Lab ID: 60180689006)
  - Ethanol
- MW-148 SS1 (Lab ID: 60180689002)
  - Ethanol
- MW-148 SS2 (Lab ID: 60180689003)
  - Ethanol
- MW-171 SS1 (Lab ID: 60180689004)
  - Ethanol
- MW-171 SS2 (Lab ID: 60180689005)
  - Ethanol

3e: Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

- DUP-1 (Lab ID: 60180689006)
  - 1,2-Dichloroethane-d4 (S)
- MW-148 SS1 (Lab ID: 60180689002)
  - 1,2-Dichloroethane-d4 (S)
- MW-148 SS2 (Lab ID: 60180689003)
  - 1,2-Dichloroethane-d4 (S)
- MW-171 SS1 (Lab ID: 60180689004)
  - 1,2-Dichloroethane-d4 (S)
- MW-171 SS2 (Lab ID: 60180689005)
  - 1,2-Dichloroethane-d4 (S)

4e: Samples were rr out of hold after a compliant ICV with the same results for Ethanol.

- MW-148 SS2 (Lab ID: 60180689003)
  - 1,2-Dichloroethane-d4 (S)

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 8260**
Description: 8260 MSV 5035A VOA
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
6 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, where applicable, 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/65433

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

QC Batch: MSV/65458

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

Additional Comments:

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PROJECT NARRATIVE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Method: **EPA 9045**
Description: 9045 pH Soil
Client: Burns and McDonnell_BP
Date: November 07, 2014

General Information:
5 samples were analyzed for EPA 9045. 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.

H1: Analysis conducted outside the EPA method holding time.
- MW-148 SS1 (Lab ID: 60180689002)
- MW-148 SS2 (Lab ID: 60180689003)
- MW-171 SS1 (Lab ID: 60180689004)
- MW-171 SS2 (Lab ID: 60180689005)

H3: Sample was received or analysis requested beyond the recognized method holding time.
- DUP-1 (Lab ID: 60180689006)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, 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.

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: TB10172014B **Lab ID: 60180689001** Collected: 10/17/14 08:50 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.0	1		10/30/14 13:42		
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	20.0	1		10/30/14 13:42	67-64-1	
Acrylonitrile	ND	ug/kg	100	1		10/30/14 13:42	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.0	1		10/30/14 13:42	994-05-8	
Benzene	ND	ug/kg	5.0	1		10/30/14 13:42	71-43-2	
Bromodichloromethane	ND	ug/kg	5.0	1		10/30/14 13:42	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.0	1		10/30/14 13:42	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.0	1		10/30/14 13:42	75-65-0	
n-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	135-98-8	
Carbon disulfide	ND	ug/kg	5.0	1		10/30/14 13:42	75-15-0	
Chlorobenzene	ND	ug/kg	5.0	1		10/30/14 13:42	108-90-7	
Chloroethane	ND	ug/kg	5.0	1		10/30/14 13:42	75-00-3	
Chloroform	ND	ug/kg	5.0	1		10/30/14 13:42	67-66-3	
Chloromethane	ND	ug/kg	5.0	1		10/30/14 13:42	74-87-3	
Dibromochloromethane	ND	ug/kg	5.0	1		10/30/14 13:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		10/30/14 13:42	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		10/30/14 13:42	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.0	1		10/30/14 13:42	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 13:42	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1		10/30/14 13:42	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1		10/30/14 13:42	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	1		10/30/14 13:42	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.0	1		10/30/14 13:42	78-87-5	
Diisopropyl ether	ND	ug/kg	5.0	1		10/30/14 13:42	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	100	1		10/30/14 13:42	123-91-1	
Ethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 13:42	637-92-3	
2-Hexanone	ND	ug/kg	20.0	1		10/30/14 13:42	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		10/30/14 13:42	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1		10/30/14 13:42	99-87-6	
Methylene chloride	ND	ug/kg	5.0	1		10/30/14 13:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.0	1		10/30/14 13:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		10/30/14 13:42	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	103-65-1	
Styrene	ND	ug/kg	5.0	1		10/30/14 13:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		10/30/14 13:42	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		10/30/14 13:42	127-18-4	
Toluene	ND	ug/kg	5.0	1		10/30/14 13:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		10/30/14 13:42	71-55-6	
Trichloroethene	ND	ug/kg	5.0	1		10/30/14 13:42	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		10/30/14 13:42	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		10/30/14 13:42	108-67-8	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: TB10172014B **Lab ID: 60180689001** Collected: 10/17/14 08:50 Received: 10/18/14 09:40 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							
Vinyl acetate	ND	ug/kg	10.0	1		10/30/14 13:42	108-05-4	
Vinyl chloride	ND	ug/kg	5.0	1		10/30/14 13:42	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1		10/30/14 13:42	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		10/30/14 13:42	2037-26-5	
4-Bromofluorobenzene (S)	99	%	76-123	1		10/30/14 13:42	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	75-129	1		10/30/14 13:42	17060-07-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS1 **Lab ID: 60180689002** Collected: 10/17/14 14:40 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	68334-30-5	
Fuel Oil	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	68553-00-4	
Jet Fuel	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	94114-58-6	
Kerosene	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	8008-20-6	
Mineral Spirits	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	8030-30-6	
Motor Oil	ND	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03	64742-65-0	
TEH as Diesel No.2	**38.3**	mg/kg	12.4	1	10/28/14 00:00	10/30/14 21:03		5e
Surrogates								
n-Tetracosane (S)	81	%	46-147	1	10/28/14 00:00	10/30/14 21:03	646-31-1	
p-Terphenyl (S)	74	%	41-149	1	10/28/14 00:00	10/30/14 21:03	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**2.8**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:56	7440-38-2	
Barium	**88.5**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:56	7440-39-3	
Cadmium	**11.9**	mg/kg	0.55	1	10/24/14 13:00	10/30/14 10:56	7440-43-9	
Chromium	**10**	mg/kg	0.55	1	10/24/14 13:00	10/30/14 10:56	7440-47-3	
Lead	**130**	mg/kg	1.1	1	10/24/14 13:00	10/30/14 10:56	7439-92-1	
Selenium	ND	mg/kg	1.7	1	10/24/14 13:00	10/30/14 10:56	7782-49-2	
Silver	ND	mg/kg	0.78	1	10/24/14 13:00	10/30/14 10:56	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.057	1	10/22/14 09:00	10/22/14 13:59	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**7.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	83-32-9	
Acenaphthylene	**6.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	208-96-8	
Anthracene	**14.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	50-32-8	R1
Benzo(b)fluoranthene	**4.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	191-24-2	R1
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	207-08-9	
Chrysene	**7.0**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	53-70-3	R1
Fluoranthene	**32.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	206-44-0	
Fluorene	**15.9**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	193-39-5	R1
1-Methylnaphthalene	**25.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	90-12-0	M1
2-Methylnaphthalene	**48.0**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	91-57-6	
Naphthalene	**113**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	91-20-3	M1
Phenanthrene	**78.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	85-01-8	M1
Pyrene	**24.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:39	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	90	%	47-120	1	10/28/14 00:00	10/31/14 02:00	321-60-8	
Terphenyl-d14 (S)	73	%	42-127	1	10/28/14 00:00	10/31/14 02:00	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS1 **Lab ID: 60180689002** Collected: 10/17/14 14:40 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	106-46-7	
Diethylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	105-67-9	
Dimethylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	131-11-3	
Di-n-butylphthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2130	1	10/28/14 00:00	10/31/14 02:00	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00		
4-Nitrophenol	ND	ug/kg	2130	1	10/28/14 00:00	10/31/14 02:00	100-02-7	
Phenol	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	108-95-2	
Pyridine	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	110-86-1	
Quinoline	ND	ug/kg	421	1	10/28/14 00:00	10/31/14 02:00	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	70	%	15-155	1	10/28/14 00:00	10/31/14 02:00	4165-60-0	
2-Fluorobiphenyl (S)	90	%	20-159	1	10/28/14 00:00	10/31/14 02:00	321-60-8	
Terphenyl-d14 (S)	73	%	18-160	1	10/28/14 00:00	10/31/14 02:00	1718-51-0	
Phenol-d6 (S)	93	%	44-120	1	10/28/14 00:00	10/31/14 02:00	13127-88-3	
2-Fluorophenol (S)	93	%	38-120	1	10/28/14 00:00	10/31/14 02:00	367-12-4	
2,4,6-Tribromophenol (S)	92	%	36-120	1	10/28/14 00:00	10/31/14 02:00	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.1	1		10/30/14 15:30		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	476	1	10/28/14 08:58	10/31/14 18:56	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	111	%.	30-150	1	10/28/14 08:58	10/31/14 18:56	17060-07-0	3e
Toluene-d8 (S)	104	%.	30-150	1	10/28/14 08:58	10/31/14 18:56	2037-26-5	
4-Bromofluorobenzene (S)	110	%.	30-150	1	10/28/14 08:58	10/31/14 18:56	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	22.5	1		10/30/14 15:30	67-64-1	
Acrylonitrile	ND	ug/kg	113	1		10/30/14 15:30	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.6	1		10/30/14 15:30	994-05-8	
Benzene	ND	ug/kg	5.6	1		10/30/14 15:30	71-43-2	
Bromodichloromethane	ND	ug/kg	5.6	1		10/30/14 15:30	75-27-4	
2-Butanone (MEK)	ND	ug/kg	11.3	1		10/30/14 15:30	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	11.3	1		10/30/14 15:30	75-65-0	
n-Butylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	135-98-8	
Carbon disulfide	ND	ug/kg	5.6	1		10/30/14 15:30	75-15-0	
Chlorobenzene	ND	ug/kg	5.6	1		10/30/14 15:30	108-90-7	
Chloroethane	ND	ug/kg	5.6	1		10/30/14 15:30	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS1 **Lab ID: 60180689002** Collected: 10/17/14 14:40 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.6	1		10/30/14 15:30	67-66-3	
Chloromethane	ND	ug/kg	5.6	1		10/30/14 15:30	74-87-3	
Dibromochloromethane	ND	ug/kg	5.6	1		10/30/14 15:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.6	1		10/30/14 15:30	106-93-4	
Dibromomethane	ND	ug/kg	5.6	1		10/30/14 15:30	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.6	1		10/30/14 15:30	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.6	1		10/30/14 15:30	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.6	1		10/30/14 15:30	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.6	1		10/30/14 15:30	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.6	1		10/30/14 15:30	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.6	1		10/30/14 15:30	78-87-5	
Diisopropyl ether	ND	ug/kg	5.6	1		10/30/14 15:30	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	113	1		10/30/14 15:30	123-91-1	
Ethylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.6	1		10/30/14 15:30	637-92-3	
2-Hexanone	ND	ug/kg	22.5	1		10/30/14 15:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.6	1		10/30/14 15:30	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.6	1		10/30/14 15:30	99-87-6	
Methylene chloride	ND	ug/kg	5.6	1		10/30/14 15:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.3	1		10/30/14 15:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.6	1		10/30/14 15:30	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	103-65-1	
Styrene	ND	ug/kg	5.6	1		10/30/14 15:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.6	1		10/30/14 15:30	79-34-5	
Tetrachloroethene	ND	ug/kg	5.6	1		10/30/14 15:30	127-18-4	
Toluene	ND	ug/kg	5.6	1		10/30/14 15:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.6	1		10/30/14 15:30	71-55-6	
Trichloroethene	ND	ug/kg	5.6	1		10/30/14 15:30	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.6	1		10/30/14 15:30	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.6	1		10/30/14 15:30	108-67-8	
Vinyl acetate	ND	ug/kg	11.3	1		10/30/14 15:30	108-05-4	
Vinyl chloride	ND	ug/kg	5.6	1		10/30/14 15:30	75-01-4	
Xylene (Total)	ND	ug/kg	5.6	1		10/30/14 15:30	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		10/30/14 15:30	2037-26-5	
4-Bromofluorobenzene (S)	102	%	76-123	1		10/30/14 15:30	460-00-4	
1,2-Dichloroethane-d4 (S)	125	%	75-129	1		10/30/14 15:30	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**22.2**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS2 **Lab ID: 60180689003** Collected: 10/17/14 14:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	68334-30-5	
Fuel Oil	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	68553-00-4	
Jet Fuel	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	94114-58-6	
Kerosene	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	8008-20-6	
Mineral Spirits	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	8030-30-6	
Motor Oil	ND	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11	64742-65-0	
TEH as Diesel No.2	**21.7**	mg/kg	12.9	1	10/28/14 00:00	10/30/14 21:11		5e
Surrogates								
n-Tetracosane (S)	80	%	46-147	1	10/28/14 00:00	10/30/14 21:11	646-31-1	
p-Terphenyl (S)	87	%	41-149	1	10/28/14 00:00	10/30/14 21:11	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**3.7**	mg/kg	0.98	1	10/24/14 13:00	10/30/14 11:00	7440-38-2	
Barium	**175**	mg/kg	0.98	1	10/24/14 13:00	10/30/14 11:00	7440-39-3	
Cadmium	ND	mg/kg	0.49	1	10/24/14 13:00	10/30/14 11:00	7440-43-9	
Chromium	**25.5**	mg/kg	0.49	1	10/24/14 13:00	10/30/14 11:00	7440-47-3	
Lead	**19.7**	mg/kg	0.98	1	10/24/14 13:00	10/30/14 11:00	7439-92-1	
Selenium	ND	mg/kg	1.5	1	10/24/14 13:00	10/30/14 11:00	7782-49-2	
Silver	ND	mg/kg	0.69	1	10/24/14 13:00	10/30/14 11:00	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.063	1	10/22/14 09:00	10/22/14 14:02	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	208-96-8	
Anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	207-08-9	
Chrysene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	53-70-3	
Fluoranthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	206-44-0	
Fluorene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	193-39-5	
1-Methylnaphthalene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	90-12-0	
2-Methylnaphthalene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	91-57-6	
Naphthalene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	91-20-3	
Phenanthrene	**4.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	85-01-8	
Pyrene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 14:59	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	85	%	47-120	1	10/28/14 00:00	10/31/14 12:48	321-60-8	
Terphenyl-d14 (S)	82	%	42-127	1	10/28/14 00:00	10/31/14 12:48	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS2 **Lab ID: 60180689003** Collected: 10/17/14 14:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	106-46-7	
Diethylphthalate	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	105-67-9	
Dimethylphthalate	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	131-11-3	
Di-n-butylphthalate	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/31/14 12:48	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48		
4-Nitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/31/14 12:48	100-02-7	
Phenol	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	108-95-2	
Pyridine	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	110-86-1	
Quinoline	ND	ug/kg	423	1	10/28/14 00:00	10/31/14 12:48	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	83	%	15-155	1	10/28/14 00:00	10/31/14 12:48	4165-60-0	
2-Fluorobiphenyl (S)	85	%	20-159	1	10/28/14 00:00	10/31/14 12:48	321-60-8	
Terphenyl-d14 (S)	82	%	18-160	1	10/28/14 00:00	10/31/14 12:48	1718-51-0	
Phenol-d6 (S)	83	%	44-120	1	10/28/14 00:00	10/31/14 12:48	13127-88-3	
2-Fluorophenol (S)	84	%	38-120	1	10/28/14 00:00	10/31/14 12:48	367-12-4	
2,4,6-Tribromophenol (S)	87	%	36-120	1	10/28/14 00:00	10/31/14 12:48	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.6	1		10/30/14 15:45		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	486	1	10/28/14 08:58	10/31/14 19:15	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%.	30-150	1	10/28/14 08:58	10/31/14 19:15	17060-07-0	3e,4e
Toluene-d8 (S)	102	%.	30-150	1	10/28/14 08:58	10/31/14 19:15	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	30-150	1	10/28/14 08:58	10/31/14 19:15	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	31.6	1		10/30/14 15:45	67-64-1	
Acrylonitrile	ND	ug/kg	158	1		10/30/14 15:45	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	7.9	1		10/30/14 15:45	994-05-8	
Benzene	ND	ug/kg	7.9	1		10/30/14 15:45	71-43-2	
Bromodichloromethane	ND	ug/kg	7.9	1		10/30/14 15:45	75-27-4	
2-Butanone (MEK)	ND	ug/kg	15.8	1		10/30/14 15:45	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	15.8	1		10/30/14 15:45	75-65-0	
n-Butylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	104-51-8	
sec-Butylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	135-98-8	
Carbon disulfide	ND	ug/kg	7.9	1		10/30/14 15:45	75-15-0	
Chlorobenzene	ND	ug/kg	7.9	1		10/30/14 15:45	108-90-7	
Chloroethane	ND	ug/kg	7.9	1		10/30/14 15:45	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-148 SS2 **Lab ID: 60180689003** Collected: 10/17/14 14:55 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	7.9	1		10/30/14 15:45	67-66-3	
Chloromethane	ND	ug/kg	7.9	1		10/30/14 15:45	74-87-3	
Dibromochloromethane	ND	ug/kg	7.9	1		10/30/14 15:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	7.9	1		10/30/14 15:45	106-93-4	
Dibromomethane	ND	ug/kg	7.9	1		10/30/14 15:45	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	7.9	1		10/30/14 15:45	110-57-6	
1,1-Dichloroethane	ND	ug/kg	7.9	1		10/30/14 15:45	75-34-3	
1,2-Dichloroethane	ND	ug/kg	7.9	1		10/30/14 15:45	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	7.9	1		10/30/14 15:45	540-59-0	
1,1-Dichloroethene	ND	ug/kg	7.9	1		10/30/14 15:45	75-35-4	
1,2-Dichloropropane	ND	ug/kg	7.9	1		10/30/14 15:45	78-87-5	
Diisopropyl ether	ND	ug/kg	7.9	1		10/30/14 15:45	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	158	1		10/30/14 15:45	123-91-1	
Ethylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	7.9	1		10/30/14 15:45	637-92-3	
2-Hexanone	ND	ug/kg	31.6	1		10/30/14 15:45	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	7.9	1		10/30/14 15:45	98-82-8	
p-Isopropyltoluene	ND	ug/kg	7.9	1		10/30/14 15:45	99-87-6	
Methylene chloride	ND	ug/kg	7.9	1		10/30/14 15:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	15.8	1		10/30/14 15:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	7.9	1		10/30/14 15:45	1634-04-4	
n-Propylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	103-65-1	
Styrene	ND	ug/kg	7.9	1		10/30/14 15:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.9	1		10/30/14 15:45	79-34-5	
Tetrachloroethene	ND	ug/kg	7.9	1		10/30/14 15:45	127-18-4	
Toluene	ND	ug/kg	7.9	1		10/30/14 15:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	7.9	1		10/30/14 15:45	71-55-6	
Trichloroethene	ND	ug/kg	7.9	1		10/30/14 15:45	79-01-6	
Trichlorofluoromethane	ND	ug/kg	7.9	1		10/30/14 15:45	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	7.9	1		10/30/14 15:45	108-67-8	
Vinyl acetate	ND	ug/kg	15.8	1		10/30/14 15:45	108-05-4	
Vinyl chloride	ND	ug/kg	7.9	1		10/30/14 15:45	75-01-4	
Xylene (Total)	ND	ug/kg	7.9	1		10/30/14 15:45	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		10/30/14 15:45	2037-26-5	
4-Bromofluorobenzene (S)	102	%	76-123	1		10/30/14 15:45	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	75-129	1		10/30/14 15:45	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**22.9**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**8.2**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS1 **Lab ID: 60180689004** Collected: 10/17/14 16:45 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	68334-30-5	
Fuel Oil	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	68553-00-4	
Jet Fuel	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	94114-58-6	
Kerosene	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	8008-20-6	
Mineral Spirits	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	8030-30-6	
Motor Oil	ND	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18	64742-65-0	
TEH as Diesel No.2	**49.9**	mg/kg	12.8	1	10/28/14 00:00	10/30/14 21:18		5e
Surrogates								
n-Tetracosane (S)	82	%	46-147	1	10/28/14 00:00	10/30/14 21:18	646-31-1	
p-Terphenyl (S)	88	%	41-149	1	10/28/14 00:00	10/30/14 21:18	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**4.0**	mg/kg	0.86	1	10/24/14 13:00	10/30/14 11:03	7440-38-2	
Barium	**111**	mg/kg	0.86	1	10/24/14 13:00	10/30/14 11:03	7440-39-3	
Cadmium	**3.8**	mg/kg	0.43	1	10/24/14 13:00	10/30/14 11:03	7440-43-9	
Chromium	**15.3**	mg/kg	0.43	1	10/24/14 13:00	10/30/14 11:03	7440-47-3	
Lead	**21.1**	mg/kg	0.86	1	10/24/14 13:00	10/30/14 11:03	7439-92-1	
Selenium	ND	mg/kg	1.3	1	10/24/14 13:00	10/30/14 11:03	7782-49-2	
Silver	ND	mg/kg	0.60	1	10/24/14 13:00	10/30/14 11:03	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.050	1	10/22/14 09:00	10/22/14 14:04	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	208-96-8	
Anthracene	**13.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	120-12-7	
Benzo(a)anthracene	**25.1**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	56-55-3	
Benzo(a)pyrene	**25.8**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	50-32-8	
Benzo(b)fluoranthene	**31.4**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	205-99-2	
Benzo(g,h,i)perylene	**29.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	191-24-2	
Benzo(k)fluoranthene	**15.5**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	207-08-9	
Chrysene	**47.2**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	218-01-9	
Dibenz(a,h)anthracene	**10.3**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	53-70-3	
Fluoranthene	**27.6**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	206-44-0	
Fluorene	ND	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**13.2**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	193-39-5	
1-Methylnaphthalene	**28.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	90-12-0	
2-Methylnaphthalene	**62.8**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	91-57-6	
Naphthalene	**15.8**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	91-20-3	
Phenanthrene	**126**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	85-01-8	
Pyrene	**54.7**	ug/kg	4.2	1	10/28/14 00:00	10/30/14 15:18	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	90	%	47-120	1	10/28/14 00:00	10/31/14 13:09	321-60-8	
Terphenyl-d14 (S)	90	%	42-127	1	10/28/14 00:00	10/31/14 13:09	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS1 **Lab ID: 60180689004** Collected: 10/17/14 16:45 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	106-46-7	
Diethylphthalate	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	105-67-9	
Dimethylphthalate	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	131-11-3	
Di-n-butylphthalate	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/31/14 13:09	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09		
4-Nitrophenol	ND	ug/kg	2140	1	10/28/14 00:00	10/31/14 13:09	100-02-7	
Phenol	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	108-95-2	
Pyridine	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	110-86-1	
Quinoline	ND	ug/kg	422	1	10/28/14 00:00	10/31/14 13:09	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	81	%	15-155	1	10/28/14 00:00	10/31/14 13:09	4165-60-0	
2-Fluorobiphenyl (S)	90	%	20-159	1	10/28/14 00:00	10/31/14 13:09	321-60-8	
Terphenyl-d14 (S)	90	%	18-160	1	10/28/14 00:00	10/31/14 13:09	1718-51-0	
Phenol-d6 (S)	83	%	44-120	1	10/28/14 00:00	10/31/14 13:09	13127-88-3	
2-Fluorophenol (S)	81	%	38-120	1	10/28/14 00:00	10/31/14 13:09	367-12-4	
2,4,6-Tribromophenol (S)	88	%	36-120	1	10/28/14 00:00	10/31/14 13:09	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	ND	mg/kg	1.2	1		10/30/14 16:01		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	487	1	10/28/14 08:58	10/31/14 19:33	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%.	30-150	1	10/28/14 08:58	10/31/14 19:33	17060-07-0	3e
Toluene-d8 (S)	106	%.	30-150	1	10/28/14 08:58	10/31/14 19:33	2037-26-5	
4-Bromofluorobenzene (S)	112	%.	30-150	1	10/28/14 08:58	10/31/14 19:33	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	**98.1**	ug/kg	24.3	1		10/30/14 16:01	67-64-1	
Acrylonitrile	ND	ug/kg	122	1		10/30/14 16:01	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	6.1	1		10/30/14 16:01	994-05-8	
Benzene	ND	ug/kg	6.1	1		10/30/14 16:01	71-43-2	
Bromodichloromethane	ND	ug/kg	6.1	1		10/30/14 16:01	75-27-4	
2-Butanone (MEK)	ND	ug/kg	12.2	1		10/30/14 16:01	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	12.2	1		10/30/14 16:01	75-65-0	
n-Butylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	135-98-8	
Carbon disulfide	ND	ug/kg	6.1	1		10/30/14 16:01	75-15-0	
Chlorobenzene	ND	ug/kg	6.1	1		10/30/14 16:01	108-90-7	
Chloroethane	ND	ug/kg	6.1	1		10/30/14 16:01	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS1 **Lab ID: 60180689004** Collected: 10/17/14 16:45 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	6.1	1		10/30/14 16:01	67-66-3	
Chloromethane	ND	ug/kg	6.1	1		10/30/14 16:01	74-87-3	
Dibromochloromethane	ND	ug/kg	6.1	1		10/30/14 16:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1		10/30/14 16:01	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1		10/30/14 16:01	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	6.1	1		10/30/14 16:01	110-57-6	
1,1-Dichloroethane	ND	ug/kg	6.1	1		10/30/14 16:01	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1		10/30/14 16:01	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.1	1		10/30/14 16:01	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.1	1		10/30/14 16:01	75-35-4	
1,2-Dichloropropane	ND	ug/kg	6.1	1		10/30/14 16:01	78-87-5	
Diisopropyl ether	ND	ug/kg	6.1	1		10/30/14 16:01	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	122	1		10/30/14 16:01	123-91-1	
Ethylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	6.1	1		10/30/14 16:01	637-92-3	
2-Hexanone	ND	ug/kg	24.3	1		10/30/14 16:01	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1		10/30/14 16:01	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	1		10/30/14 16:01	99-87-6	
Methylene chloride	ND	ug/kg	6.1	1		10/30/14 16:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.2	1		10/30/14 16:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.1	1		10/30/14 16:01	1634-04-4	
n-Propylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	103-65-1	
Styrene	ND	ug/kg	6.1	1		10/30/14 16:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	1		10/30/14 16:01	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1		10/30/14 16:01	127-18-4	
Toluene	ND	ug/kg	6.1	1		10/30/14 16:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1		10/30/14 16:01	71-55-6	
Trichloroethene	ND	ug/kg	6.1	1		10/30/14 16:01	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1		10/30/14 16:01	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	1		10/30/14 16:01	108-67-8	
Vinyl acetate	ND	ug/kg	12.2	1		10/30/14 16:01	108-05-4	
Vinyl chloride	ND	ug/kg	6.1	1		10/30/14 16:01	75-01-4	
Xylene (Total)	ND	ug/kg	6.1	1		10/30/14 16:01	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	80-120	1		10/30/14 16:01	2037-26-5	
4-Bromofluorobenzene (S)	100	%	76-123	1		10/30/14 16:01	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	75-129	1		10/30/14 16:01	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**22.7**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.7**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS2 **Lab ID: 60180689005** Collected: 10/17/14 16:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	68334-30-5	
Fuel Oil	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	68553-00-4	
Jet Fuel	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	94114-58-6	
Kerosene	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	8008-20-6	
Mineral Spirits	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	8030-30-6	
Motor Oil	ND	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25	64742-65-0	
TEH as Diesel No.2	**74.8**	mg/kg	12.5	1	10/28/14 00:00	10/30/14 21:25		5e
Surrogates								
n-Tetracosane (S)	86	%	46-147	1	10/28/14 00:00	10/30/14 21:25	646-31-1	
p-Terphenyl (S)	93	%	41-149	1	10/28/14 00:00	10/30/14 21:25	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**12.9**	mg/kg	0.95	1	10/24/14 13:00	10/30/14 11:07	7440-38-2	
Barium	**145**	mg/kg	0.95	1	10/24/14 13:00	10/30/14 11:07	7440-39-3	
Cadmium	ND	mg/kg	0.47	1	10/24/14 13:00	10/30/14 11:07	7440-43-9	
Chromium	**43.5**	mg/kg	0.47	1	10/24/14 13:00	10/30/14 11:07	7440-47-3	
Lead	**15.7**	mg/kg	0.95	1	10/24/14 13:00	10/30/14 11:07	7439-92-1	
Selenium	ND	mg/kg	1.4	1	10/24/14 13:00	10/30/14 11:07	7782-49-2	
Silver	ND	mg/kg	0.66	1	10/24/14 13:00	10/30/14 11:07	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.055	1	10/22/14 09:00	10/22/14 14:06	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**9.3**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	208-96-8	
Anthracene	**11.1**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	120-12-7	
Benzo(a)anthracene	**5.5**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	207-08-9	
Chrysene	**9.3**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	53-70-3	
Fluoranthene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	206-44-0	
Fluorene	**18.6**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	193-39-5	
1-Methylnaphthalene	**272**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	90-12-0	
2-Methylnaphthalene	**292**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	91-57-6	
Naphthalene	**98.6**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	91-20-3	
Phenanthrene	**53.8**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	85-01-8	
Pyrene	**15.2**	ug/kg	4.1	1	10/28/14 00:00	10/30/14 15:38	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	89	%	47-120	1	10/28/14 00:00	10/31/14 13:30	321-60-8	
Terphenyl-d14 (S)	93	%	42-127	1	10/28/14 00:00	10/31/14 13:30	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS2 **Lab ID: 60180689005** Collected: 10/17/14 16:55 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	106-46-7	
Diethylphthalate	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	105-67-9	
Dimethylphthalate	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	131-11-3	
Di-n-butylphthalate	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	2080	1	10/28/14 00:00	10/31/14 13:30	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30		
4-Nitrophenol	ND	ug/kg	2080	1	10/28/14 00:00	10/31/14 13:30	100-02-7	
Phenol	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	108-95-2	
Pyridine	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	110-86-1	
Quinoline	ND	ug/kg	411	1	10/28/14 00:00	10/31/14 13:30	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	86	%	15-155	1	10/28/14 00:00	10/31/14 13:30	4165-60-0	
2-Fluorobiphenyl (S)	89	%	20-159	1	10/28/14 00:00	10/31/14 13:30	321-60-8	
Terphenyl-d14 (S)	93	%	18-160	1	10/28/14 00:00	10/31/14 13:30	1718-51-0	
Phenol-d6 (S)	83	%	44-120	1	10/28/14 00:00	10/31/14 13:30	13127-88-3	
2-Fluorophenol (S)	86	%	38-120	1	10/28/14 00:00	10/31/14 13:30	367-12-4	
2,4,6-Tribromophenol (S)	86	%	36-120	1	10/28/14 00:00	10/31/14 13:30	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	**4.1**	mg/kg	1.0	1		10/31/14 16:07		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	493	1	10/28/14 08:58	10/31/14 19:52	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%.	30-150	1	10/28/14 08:58	10/31/14 19:52	17060-07-0	3e
Toluene-d8 (S)	103	%.	30-150	1	10/28/14 08:58	10/31/14 19:52	2037-26-5	
4-Bromofluorobenzene (S)	113	%.	30-150	1	10/28/14 08:58	10/31/14 19:52	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	**27.5**	ug/kg	20.3	1		10/31/14 16:07	67-64-1	
Acrylonitrile	ND	ug/kg	101	1		10/31/14 16:07	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.1	1		10/31/14 16:07	994-05-8	
Benzene	ND	ug/kg	5.1	1		10/31/14 16:07	71-43-2	
Bromodichloromethane	ND	ug/kg	5.1	1		10/31/14 16:07	75-27-4	
2-Butanone (MEK)	ND	ug/kg	10.1	1		10/31/14 16:07	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.1	1		10/31/14 16:07	75-65-0	
n-Butylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	135-98-8	
Carbon disulfide	ND	ug/kg	5.1	1		10/31/14 16:07	75-15-0	
Chlorobenzene	ND	ug/kg	5.1	1		10/31/14 16:07	108-90-7	
Chloroethane	ND	ug/kg	5.1	1		10/31/14 16:07	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: MW-171 SS2 **Lab ID: 60180689005** Collected: 10/17/14 16:55 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	5.1	1		10/31/14 16:07	67-66-3	
Chloromethane	ND	ug/kg	5.1	1		10/31/14 16:07	74-87-3	
Dibromochloromethane	ND	ug/kg	5.1	1		10/31/14 16:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	1		10/31/14 16:07	106-93-4	
Dibromomethane	ND	ug/kg	5.1	1		10/31/14 16:07	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.1	1		10/31/14 16:07	110-57-6	
1,1-Dichloroethane	ND	ug/kg	5.1	1		10/31/14 16:07	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.1	1		10/31/14 16:07	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.1	1		10/31/14 16:07	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.1	1		10/31/14 16:07	75-35-4	
1,2-Dichloropropane	ND	ug/kg	5.1	1		10/31/14 16:07	78-87-5	
Diisopropyl ether	ND	ug/kg	5.1	1		10/31/14 16:07	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	101	1		10/31/14 16:07	123-91-1	
Ethylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.1	1		10/31/14 16:07	637-92-3	
2-Hexanone	ND	ug/kg	20.3	1		10/31/14 16:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	1		10/31/14 16:07	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.1	1		10/31/14 16:07	99-87-6	
Methylene chloride	ND	ug/kg	5.1	1		10/31/14 16:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.1	1		10/31/14 16:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.1	1		10/31/14 16:07	1634-04-4	
n-Propylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	103-65-1	
Styrene	ND	ug/kg	5.1	1		10/31/14 16:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1		10/31/14 16:07	79-34-5	
Tetrachloroethene	ND	ug/kg	5.1	1		10/31/14 16:07	127-18-4	
Toluene	ND	ug/kg	5.1	1		10/31/14 16:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.1	1		10/31/14 16:07	71-55-6	
Trichloroethene	ND	ug/kg	5.1	1		10/31/14 16:07	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.1	1		10/31/14 16:07	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.1	1		10/31/14 16:07	108-67-8	
Vinyl acetate	ND	ug/kg	10.1	1		10/31/14 16:07	108-05-4	
Vinyl chloride	ND	ug/kg	5.1	1		10/31/14 16:07	75-01-4	
Xylene (Total)	ND	ug/kg	5.1	1		10/31/14 16:07	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		10/31/14 16:07	2037-26-5	
4-Bromofluorobenzene (S)	104	%	76-123	1		10/31/14 16:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	75-129	1		10/31/14 16:07	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**21.4**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		11/03/14 13:00		H1

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: DUP-1 **Lab ID: 60180689006** Collected: 10/17/14 08:00 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OA2 GCS	Analytical Method: OA2 Preparation Method: EPA 3546							
Diesel Fuel	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	68334-30-5	
Fuel Oil	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	68553-00-4	
Jet Fuel	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	94114-58-6	
Kerosene	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	8008-20-6	
Mineral Spirits	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	8030-30-6	
Motor Oil	ND	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33	64742-65-0	
TEH as Diesel No.2	**86.1**	mg/kg	11.7	1	10/28/14 00:00	10/30/14 21:33		5e
Surrogates								
n-Tetracosane (S)	88	%	46-147	1	10/28/14 00:00	10/30/14 21:33	646-31-1	
p-Terphenyl (S)	95	%	41-149	1	10/28/14 00:00	10/30/14 21:33	92-94-4	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	**5.6**	mg/kg	0.82	1	10/24/14 13:00	10/30/14 11:10	7440-38-2	
Barium	**203**	mg/kg	0.82	1	10/24/14 13:00	10/30/14 11:10	7440-39-3	
Cadmium	ND	mg/kg	0.41	1	10/24/14 13:00	10/30/14 11:10	7440-43-9	
Chromium	**20.9**	mg/kg	0.41	1	10/24/14 13:00	10/30/14 11:10	7440-47-3	
Lead	**12.3**	mg/kg	0.82	1	10/24/14 13:00	10/30/14 11:10	7439-92-1	
Selenium	ND	mg/kg	1.2	1	10/24/14 13:00	10/30/14 11:10	7782-49-2	
Silver	ND	mg/kg	0.58	1	10/24/14 13:00	10/30/14 11:10	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND	mg/kg	0.051	1	10/22/14 09:00	10/22/14 14:08	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546							
Acenaphthene	**3.9**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	83-32-9	
Acenaphthylene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	208-96-8	
Anthracene	**4.8**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	207-08-9	
Chrysene	**3.9**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	53-70-3	
Fluoranthene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	206-44-0	
Fluorene	**7.2**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	193-39-5	
1-Methylnaphthalene	**91.6**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	90-12-0	
2-Methylnaphthalene	**77.0**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	91-57-6	
Naphthalene	**30.8**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	91-20-3	
Phenanthrene	**21.4**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	85-01-8	
Pyrene	**6.4**	ug/kg	3.8	1	10/28/14 00:00	10/30/14 15:58	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	88	%	47-120	1	10/28/14 00:00	10/31/14 13:51	321-60-8	
Terphenyl-d14 (S)	90	%	42-127	1	10/28/14 00:00	10/31/14 13:51	1718-51-0	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: DUP-1 **Lab ID: 60180689006** Collected: 10/17/14 08:00 Received: 10/18/14 09:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
1,2-Dichlorobenzene	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	106-46-7	
Diethylphthalate	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	105-67-9	
Dimethylphthalate	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	131-11-3	
Di-n-butylphthalate	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	84-74-2	
2,4-Dinitrophenol	ND	ug/kg	1930	1	10/28/14 00:00	10/31/14 13:51	51-28-5	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	117-81-7	
2-Methylphenol(o-Cresol)	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51		
4-Nitrophenol	ND	ug/kg	1930	1	10/28/14 00:00	10/31/14 13:51	100-02-7	
Phenol	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	108-95-2	
Pyridine	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	110-86-1	
Quinoline	ND	ug/kg	382	1	10/28/14 00:00	10/31/14 13:51	91-22-5	
Surrogates								
Nitrobenzene-d5 (S)	83	%	15-155	1	10/28/14 00:00	10/31/14 13:51	4165-60-0	
2-Fluorobiphenyl (S)	88	%	20-159	1	10/28/14 00:00	10/31/14 13:51	321-60-8	
Terphenyl-d14 (S)	90	%	18-160	1	10/28/14 00:00	10/31/14 13:51	1718-51-0	
Phenol-d6 (S)	86	%	44-120	1	10/28/14 00:00	10/31/14 13:51	13127-88-3	
2-Fluorophenol (S)	87	%	38-120	1	10/28/14 00:00	10/31/14 13:51	367-12-4	
2,4,6-Tribromophenol (S)	86	%	36-120	1	10/28/14 00:00	10/31/14 13:51	118-79-6	
OA1 Volatile Pet. Hydrocarbons	Analytical Method: OA1							
Gasoline Range Organics	**14.4**	mg/kg	0.80	1		10/30/14 16:31		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A							
Ethanol	ND	ug/kg	470	1	10/28/14 08:57	10/31/14 20:10	64-17-5	1e
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	30-150	1	10/28/14 08:57	10/31/14 20:10	17060-07-0	3e
Toluene-d8 (S)	103	%.	30-150	1	10/28/14 08:57	10/31/14 20:10	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	30-150	1	10/28/14 08:57	10/31/14 20:10	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	**25.1**	ug/kg	16.0	1		10/30/14 16:31	67-64-1	
Acrylonitrile	ND	ug/kg	80.1	1		10/30/14 16:31	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	4.0	1		10/30/14 16:31	994-05-8	
Benzene	**6.9**	ug/kg	4.0	1		10/30/14 16:31	71-43-2	
Bromodichloromethane	ND	ug/kg	4.0	1		10/30/14 16:31	75-27-4	
2-Butanone (MEK)	ND	ug/kg	8.0	1		10/30/14 16:31	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	8.0	1		10/30/14 16:31	75-65-0	
n-Butylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	135-98-8	
Carbon disulfide	ND	ug/kg	4.0	1		10/30/14 16:31	75-15-0	
Chlorobenzene	ND	ug/kg	4.0	1		10/30/14 16:31	108-90-7	
Chloroethane	ND	ug/kg	4.0	1		10/30/14 16:31	75-00-3	

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ANALYTICAL RESULTS

Project: KDHE NEODESHA
Pace Project No.: 60180689

Sample: DUP-1 **Lab ID: 60180689006** Collected: 10/17/14 08:00 Received: 10/18/14 09:40 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							
Chloroform	ND	ug/kg	4.0	1		10/30/14 16:31	67-66-3	
Chloromethane	ND	ug/kg	4.0	1		10/30/14 16:31	74-87-3	
Dibromochloromethane	ND	ug/kg	4.0	1		10/30/14 16:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.0	1		10/30/14 16:31	106-93-4	
Dibromomethane	ND	ug/kg	4.0	1		10/30/14 16:31	74-95-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	4.0	1		10/30/14 16:31	110-57-6	
1,1-Dichloroethane	ND	ug/kg	4.0	1		10/30/14 16:31	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.0	1		10/30/14 16:31	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	4.0	1		10/30/14 16:31	540-59-0	
1,1-Dichloroethene	ND	ug/kg	4.0	1		10/30/14 16:31	75-35-4	
1,2-Dichloropropane	ND	ug/kg	4.0	1		10/30/14 16:31	78-87-5	
Diisopropyl ether	ND	ug/kg	4.0	1		10/30/14 16:31	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	80.1	1		10/30/14 16:31	123-91-1	
Ethylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	4.0	1		10/30/14 16:31	637-92-3	
2-Hexanone	ND	ug/kg	16.0	1		10/30/14 16:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.0	1		10/30/14 16:31	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.0	1		10/30/14 16:31	99-87-6	
Methylene chloride	ND	ug/kg	4.0	1		10/30/14 16:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.0	1		10/30/14 16:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.0	1		10/30/14 16:31	1634-04-4	
n-Propylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	103-65-1	
Styrene	ND	ug/kg	4.0	1		10/30/14 16:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.0	1		10/30/14 16:31	79-34-5	
Tetrachloroethene	ND	ug/kg	4.0	1		10/30/14 16:31	127-18-4	
Toluene	ND	ug/kg	4.0	1		10/30/14 16:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.0	1		10/30/14 16:31	71-55-6	
Trichloroethene	ND	ug/kg	4.0	1		10/30/14 16:31	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.0	1		10/30/14 16:31	75-69-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.0	1		10/30/14 16:31	108-67-8	
Vinyl acetate	ND	ug/kg	8.0	1		10/30/14 16:31	108-05-4	
Vinyl chloride	ND	ug/kg	4.0	1		10/30/14 16:31	75-01-4	
Xylene (Total)	ND	ug/kg	4.0	1		10/30/14 16:31	1330-20-7	
Surrogates								
Toluene-d8 (S)	102	%	80-120	1		10/30/14 16:31	2037-26-5	
4-Bromofluorobenzene (S)	113	%	76-123	1		10/30/14 16:31	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	75-129	1		10/30/14 16:31	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**15.8**	%	0.50	1		10/28/14 00:00		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**6.7**	Std. Units	0.10	1		11/03/14 13:00		H3

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MERP/8938 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1464677 Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.050	10/22/14 13:33	

LABORATORY CONTROL SAMPLE: 1464678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.5	0.48	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1464679 1464680

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	.55	.51	0.52	0.47	93	90	75-125	8	20	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MPRP/29467 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1466778 Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	10/30/14 09:59	
Barium	mg/kg	ND	1.0	10/30/14 09:59	
Cadmium	mg/kg	ND	0.50	10/30/14 09:59	
Chromium	mg/kg	ND	0.50	10/30/14 09:59	
Lead	mg/kg	ND	1.0	10/30/14 09:59	
Selenium	mg/kg	ND	1.5	10/30/14 09:59	
Silver	mg/kg	ND	0.70	10/30/14 09:59	

LABORATORY CONTROL SAMPLE: 1466779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	89.9	90	80-120	
Barium	mg/kg	100	93.6	94	80-120	
Cadmium	mg/kg	100	93.9	94	80-120	
Chromium	mg/kg	100	92.3	92	80-120	
Lead	mg/kg	100	95.7	96	80-120	
Selenium	mg/kg	100	89.7	90	80-120	
Silver	mg/kg	50	46.5	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1466780 1466781

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	3.9	96.9	101	78.7	81.8	77	77	75-125	4	20	
Barium	mg/kg	185	96.9	101	233	242	50	56	75-125	4	20	2e,M1
Cadmium	mg/kg	ND	96.9	101	79.7	83.2	82	82	75-125	4	20	
Chromium	mg/kg	15.6	96.9	101	98.9	99.2	86	82	75-125	0	20	
Lead	mg/kg	17.2	96.9	101	89.4	95.9	75	78	75-125	7	20	
Selenium	mg/kg	ND	96.9	101	74.6	77.1	77	76	75-125	3	20	
Silver	mg/kg	ND	48.4	50.8	41.3	43.4	85	85	75-125	5	20	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MSV/65434 Analysis Method: OA1
QC Batch Method: OA1 Analysis Description: OA1 Volatile Pet. Hydrocarbon
Associated Lab Samples: 60180689001, 60180689002, 60180689003, 60180689004, 60180689006

METHOD BLANK: 1470036 Matrix: Solid
Associated Lab Samples: 60180689001, 60180689002, 60180689003, 60180689004, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	1.0	10/30/14 13:12	

LABORATORY CONTROL SAMPLE: 1470037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	4	4.0	101	63-124	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MSV/65456
QC Batch Method: OA1
Analysis Method: OA1
Analysis Description: OA1 Volatile Pet. Hydrocarbon
Associated Lab Samples: 60180689005

METHOD BLANK: 1470855
Matrix: Solid
Associated Lab Samples: 60180689005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	1.0	10/31/14 10:46	

LABORATORY CONTROL SAMPLE: 1470856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	4	4.3	107	63-124	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MSV/29163 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1831982 Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	ug/kg	ND	400	10/31/14 13:58	SS
1,2-Dichloroethane-d4 (S)	%.	119	30-150	10/31/14 13:58	
4-Bromofluorobenzene (S)	%.	105	30-150	10/31/14 13:58	
Toluene-d8 (S)	%.	99	30-150	10/31/14 13:58	

LABORATORY CONTROL SAMPLE & LCSD: 1831983 1831984

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ug/kg	400	335J	341J	84	85	75-132		20	SS
1,2-Dichloroethane-d4 (S)	%.				112	112	30-150			
4-Bromofluorobenzene (S)	%.				103	102	30-150			
Toluene-d8 (S)	%.				103	102	30-150			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MSV/65433 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 60180689001, 60180689002, 60180689003, 60180689004, 60180689006

METHOD BLANK: 1470033 Matrix: Solid
Associated Lab Samples: 60180689001, 60180689002, 60180689003, 60180689004, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1-Dichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,1-Dichloroethene	ug/kg	ND	5.0	10/30/14 13:12	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethane	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloropropane	ug/kg	ND	5.0	10/30/14 13:12	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	100	10/30/14 13:12	
2-Butanone (MEK)	ug/kg	ND	10.0	10/30/14 13:12	
2-Hexanone	ug/kg	ND	20.0	10/30/14 13:12	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	10/30/14 13:12	
Acetone	ug/kg	ND	20.0	10/30/14 13:12	
Acrylonitrile	ug/kg	ND	100	10/30/14 13:12	
Benzene	ug/kg	ND	5.0	10/30/14 13:12	
Bromodichloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Carbon disulfide	ug/kg	ND	5.0	10/30/14 13:12	
Chlorobenzene	ug/kg	ND	5.0	10/30/14 13:12	
Chloroethane	ug/kg	ND	5.0	10/30/14 13:12	
Chloroform	ug/kg	ND	5.0	10/30/14 13:12	
Chloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Dibromochloromethane	ug/kg	ND	5.0	10/30/14 13:12	
Dibromomethane	ug/kg	ND	5.0	10/30/14 13:12	
Diisopropyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Ethyl-tert-butyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Ethylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	10/30/14 13:12	
Methyl-tert-butyl ether	ug/kg	ND	5.0	10/30/14 13:12	
Methylene chloride	ug/kg	ND	5.0	10/30/14 13:12	
n-Butylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
n-Propylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
p-Isopropyltoluene	ug/kg	ND	5.0	10/30/14 13:12	
sec-Butylbenzene	ug/kg	ND	5.0	10/30/14 13:12	
Styrene	ug/kg	ND	5.0	10/30/14 13:12	
tert-Amylmethyl ether	ug/kg	ND	5.0	10/30/14 13:12	
tert-Butyl Alcohol	ug/kg	ND	10.0	10/30/14 13:12	
Tetrachloroethene	ug/kg	ND	5.0	10/30/14 13:12	
Toluene	ug/kg	ND	5.0	10/30/14 13:12	
trans-1,4-Dichloro-2-butene	ug/kg	ND	5.0	10/30/14 13:12	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

METHOD BLANK: 1470033 Matrix: Solid
Associated Lab Samples: 60180689001, 60180689002, 60180689003, 60180689004, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/kg	ND	5.0	10/30/14 13:12	
Trichlorofluoromethane	ug/kg	ND	5.0	10/30/14 13:12	
Vinyl acetate	ug/kg	ND	10.0	10/30/14 13:12	
Vinyl chloride	ug/kg	ND	5.0	10/30/14 13:12	
Xylene (Total)	ug/kg	ND	5.0	10/30/14 13:12	
1,2-Dichloroethane-d4 (S)	%	100	75-129	10/30/14 13:12	
4-Bromofluorobenzene (S)	%	99	76-123	10/30/14 13:12	
Toluene-d8 (S)	%	99	80-120	10/30/14 13:12	

LABORATORY CONTROL SAMPLE: 1470034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	94.8	95	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	89.8	90	73-120	
1,1-Dichloroethane	ug/kg	100	94.3	94	71-120	
1,1-Dichloroethene	ug/kg	100	100	100	76-130	
1,2,4-Trimethylbenzene	ug/kg	100	90.4	90	78-120	
1,2-Dibromoethane (EDB)	ug/kg	100	98.7	99	80-121	
1,2-Dichloroethane	ug/kg	100	92.1	92	78-120	
1,2-Dichloroethene (Total)	ug/kg	200	191	95	79-121	
1,2-Dichloropropane	ug/kg	100	96.1	96	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	91.8	92	78-120	
1,4-Dioxane (p-Dioxane)	ug/kg	500	449	90	70-130	
2-Butanone (MEK)	ug/kg	500	455	91	55-135	
2-Hexanone	ug/kg	500	461	92	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	467	93	71-128	
Acetone	ug/kg	500	520	104	43-144	
Acrylonitrile	ug/kg	1000	943	94	71-120	
Benzene	ug/kg	100	92.9	93	80-120	
Bromodichloromethane	ug/kg	100	96.5	97	80-120	
Carbon disulfide	ug/kg	100	101	101	58-137	
Chlorobenzene	ug/kg	100	93.9	94	80-120	
Chloroethane	ug/kg	100	108	108	65-127	
Chloroform	ug/kg	100	93.8	94	74-120	
Chloromethane	ug/kg	100	107	107	39-138	
Dibromochloromethane	ug/kg	100	96.8	97	80-124	
Dibromomethane	ug/kg	100	97.6	98	80-120	
Diisopropyl ether	ug/kg	100	94.3	94	68-120	
Ethyl-tert-butyl ether	ug/kg	100	95.5	95	72-120	
Ethylbenzene	ug/kg	100	93.0	93	80-120	
Isopropylbenzene (Cumene)	ug/kg	100	93.7	94	80-136	
Methyl-tert-butyl ether	ug/kg	100	94.4	94	78-121	
Methylene chloride	ug/kg	100	103	103	70-123	
n-Butylbenzene	ug/kg	100	93.3	93	72-132	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

LABORATORY CONTROL SAMPLE: 1470034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/kg	100	90.7	91	72-127	
p-Isopropyltoluene	ug/kg	100	91.8	92	78-128	
sec-Butylbenzene	ug/kg	100	91.8	92	73-134	
Styrene	ug/kg	100	96.5	97	79-120	
tert-Amylmethyl ether	ug/kg	100	94.3	94	77-120	
tert-Butyl Alcohol	ug/kg	500	483	97	58-126	
Tetrachloroethene	ug/kg	100	95.4	95	78-128	
Toluene	ug/kg	100	93.1	93	79-120	
trans-1,4-Dichloro-2-butene	ug/kg	100	91.9	92	70-130	
Trichloroethene	ug/kg	100	94.7	95	80-120	
Trichlorofluoromethane	ug/kg	100	103	103	64-126	
Vinyl acetate	ug/kg	100	88.1	88	70-130	
Vinyl chloride	ug/kg	100	107	107	57-132	
Xylene (Total)	ug/kg	300	279	93	79-120	
1,2-Dichloroethane-d4 (S)	%			99	75-129	
4-Bromofluorobenzene (S)	%			100	76-123	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: MSV/65458
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 60180689005

METHOD BLANK: 1470861
Matrix: Solid
Associated Lab Samples: 60180689005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	10/31/14 10:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	10/31/14 10:46	
1,1-Dichloroethane	ug/kg	ND	5.0	10/31/14 10:46	
1,1-Dichloroethene	ug/kg	ND	5.0	10/31/14 10:46	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	10/31/14 10:46	
1,2-Dichloroethane	ug/kg	ND	5.0	10/31/14 10:46	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	10/31/14 10:46	
1,2-Dichloropropane	ug/kg	ND	5.0	10/31/14 10:46	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	100	10/31/14 10:46	
2-Butanone (MEK)	ug/kg	ND	10.0	10/31/14 10:46	
2-Hexanone	ug/kg	ND	20.0	10/31/14 10:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	10/31/14 10:46	
Acetone	ug/kg	ND	20.0	10/31/14 10:46	
Acrylonitrile	ug/kg	ND	100	10/31/14 10:46	
Benzene	ug/kg	ND	5.0	10/31/14 10:46	
Bromodichloromethane	ug/kg	ND	5.0	10/31/14 10:46	
Carbon disulfide	ug/kg	ND	5.0	10/31/14 10:46	
Chlorobenzene	ug/kg	ND	5.0	10/31/14 10:46	
Chloroethane	ug/kg	ND	5.0	10/31/14 10:46	
Chloroform	ug/kg	ND	5.0	10/31/14 10:46	
Chloromethane	ug/kg	ND	5.0	10/31/14 10:46	
Dibromochloromethane	ug/kg	ND	5.0	10/31/14 10:46	
Dibromomethane	ug/kg	ND	5.0	10/31/14 10:46	
Diisopropyl ether	ug/kg	ND	5.0	10/31/14 10:46	
Ethyl-tert-butyl ether	ug/kg	ND	5.0	10/31/14 10:46	
Ethylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	10/31/14 10:46	
Methyl-tert-butyl ether	ug/kg	ND	5.0	10/31/14 10:46	
Methylene chloride	ug/kg	ND	5.0	10/31/14 10:46	
n-Butylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
n-Propylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
p-Isopropyltoluene	ug/kg	ND	5.0	10/31/14 10:46	
sec-Butylbenzene	ug/kg	ND	5.0	10/31/14 10:46	
Styrene	ug/kg	ND	5.0	10/31/14 10:46	
tert-Amylmethyl ether	ug/kg	ND	5.0	10/31/14 10:46	
tert-Butyl Alcohol	ug/kg	ND	10.0	10/31/14 10:46	
Tetrachloroethene	ug/kg	ND	5.0	10/31/14 10:46	
Toluene	ug/kg	ND	5.0	10/31/14 10:46	
trans-1,4-Dichloro-2-butene	ug/kg	ND	5.0	10/31/14 10:46	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

METHOD BLANK: 1470861 Matrix: Solid
Associated Lab Samples: 60180689005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/kg	ND	5.0	10/31/14 10:46	
Trichlorofluoromethane	ug/kg	ND	5.0	10/31/14 10:46	
Vinyl acetate	ug/kg	ND	10.0	10/31/14 10:46	
Vinyl chloride	ug/kg	ND	5.0	10/31/14 10:46	
Xylene (Total)	ug/kg	ND	5.0	10/31/14 10:46	
1,2-Dichloroethane-d4 (S)	%	108	75-129	10/31/14 10:46	
4-Bromofluorobenzene (S)	%	100	76-123	10/31/14 10:46	
Toluene-d8 (S)	%	100	80-120	10/31/14 10:46	

LABORATORY CONTROL SAMPLE: 1470862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	94.4	94	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	97.5	97	73-120	
1,1-Dichloroethane	ug/kg	100	104	104	71-120	
1,1-Dichloroethene	ug/kg	100	114	114	76-130	
1,2,4-Trimethylbenzene	ug/kg	100	103	103	78-120	
1,2-Dibromoethane (EDB)	ug/kg	100	104	104	80-121	
1,2-Dichloroethane	ug/kg	100	98.1	98	78-120	
1,2-Dichloroethene (Total)	ug/kg	200	212	106	79-121	
1,2-Dichloropropane	ug/kg	100	105	105	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	105	105	78-120	
1,4-Dioxane (p-Dioxane)	ug/kg	500	492	98	70-130	
2-Butanone (MEK)	ug/kg	500	467	93	55-135	
2-Hexanone	ug/kg	500	482	96	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	486	97	71-128	
Acetone	ug/kg	500	534	107	43-144	
Acrylonitrile	ug/kg	1000	966	97	71-120	
Benzene	ug/kg	100	102	102	80-120	
Bromodichloromethane	ug/kg	100	105	105	80-120	
Carbon disulfide	ug/kg	100	110	110	58-137	
Chlorobenzene	ug/kg	100	107	107	80-120	
Chloroethane	ug/kg	100	117	117	65-127	
Chloroform	ug/kg	100	102	102	74-120	
Chloromethane	ug/kg	100	114	114	39-138	
Dibromochloromethane	ug/kg	100	108	108	80-124	
Dibromomethane	ug/kg	100	105	105	80-120	
Diisopropyl ether	ug/kg	100	102	102	68-120	
Ethyl-tert-butyl ether	ug/kg	100	105	105	72-120	
Ethylbenzene	ug/kg	100	107	107	80-120	
Isopropylbenzene (Cumene)	ug/kg	100	107	107	80-136	
Methyl-tert-butyl ether	ug/kg	100	102	102	78-121	
Methylene chloride	ug/kg	100	111	111	70-123	
n-Butylbenzene	ug/kg	100	110	110	72-132	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

LABORATORY CONTROL SAMPLE: 1470862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/kg	100	107	107	72-127	
p-Isopropyltoluene	ug/kg	100	106	106	78-128	
sec-Butylbenzene	ug/kg	100	108	108	73-134	
Styrene	ug/kg	100	105	105	79-120	
tert-Amylmethyl ether	ug/kg	100	101	101	77-120	
tert-Butyl Alcohol	ug/kg	500	514	103	58-126	
Tetrachloroethene	ug/kg	100	109	109	78-128	
Toluene	ug/kg	100	105	105	79-120	
trans-1,4-Dichloro-2-butene	ug/kg	100	98.8	99	70-130	
Trichloroethene	ug/kg	100	107	107	80-120	
Trichlorofluoromethane	ug/kg	100	118	118	64-126	
Vinyl acetate	ug/kg	100	98.4	98	70-130	
Vinyl chloride	ug/kg	100	118	118	57-132	
Xylene (Total)	ug/kg	300	313	104	79-120	
1,2-Dichloroethane-d4 (S)	%			98	75-129	
4-Bromofluorobenzene (S)	%			101	76-123	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: OEXT/46866 | Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 | Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1468599 | Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	ND	3.2	10/30/14 11:24	
2-Methylnaphthalene	ug/kg	ND	3.2	10/30/14 11:24	
Acenaphthene	ug/kg	ND	3.2	10/30/14 11:24	
Acenaphthylene	ug/kg	ND	3.2	10/30/14 11:24	
Anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(a)anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(a)pyrene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(b)fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	10/30/14 11:24	
Benzo(k)fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Chrysene	ug/kg	ND	3.2	10/30/14 11:24	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	10/30/14 11:24	
Fluoranthene	ug/kg	ND	3.2	10/30/14 11:24	
Fluorene	ug/kg	ND	3.2	10/30/14 11:24	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	10/30/14 11:24	
Naphthalene	ug/kg	ND	3.2	10/30/14 11:24	
Phenanthrene	ug/kg	ND	3.2	10/30/14 11:24	
Pyrene	ug/kg	ND	3.2	10/30/14 11:24	
2-Fluorobiphenyl (S)	%	86	47-120	10/30/14 22:26	
Terphenyl-d14 (S)	%	92	42-127	10/30/14 22:26	

LABORATORY CONTROL SAMPLE: 1468600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	32.8	30.2	92	57-120	
2-Methylnaphthalene	ug/kg	32.8	30.4	93	59-120	
Acenaphthene	ug/kg	32.8	29.7	91	58-120	
Acenaphthylene	ug/kg	32.8	30.4	93	56-120	
Anthracene	ug/kg	32.8	29.4	89	52-120	
Benzo(a)anthracene	ug/kg	32.8	30.3	92	56-120	
Benzo(a)pyrene	ug/kg	32.8	29.5	90	52-120	
Benzo(b)fluoranthene	ug/kg	32.8	29.9	91	54-124	
Benzo(g,h,i)perylene	ug/kg	32.8	31.0	95	47-123	
Benzo(k)fluoranthene	ug/kg	32.8	30.7	93	53-126	
Chrysene	ug/kg	32.8	29.7	90	47-120	
Dibenz(a,h)anthracene	ug/kg	32.8	29.4	89	46-126	
Fluoranthene	ug/kg	32.8	28.5	87	55-120	
Fluorene	ug/kg	32.8	31.2	95	58-120	
Indeno(1,2,3-cd)pyrene	ug/kg	32.8	30.4	93	47-123	
Naphthalene	ug/kg	32.8	30.2	92	60-120	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

LABORATORY CONTROL SAMPLE: 1468600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	32.8	29.7	91	57-120	
Pyrene	ug/kg	32.8	32.8	100	57-123	
2-Fluorobiphenyl (S)	%			85	47-120	
Terphenyl-d14 (S)	%			102	42-127	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468601 1468602

Parameter	Units	60180689002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	25.3	41.8	42.6	49.2	47.6	57	52	57-120	3	30	M1
2-Methylnaphthalene	ug/kg	48.0	41.8	42.6	61.1	61.1	31	31	25-152	0	30	
Acenaphthene	ug/kg	7.5	41.8	42.6	41.2	40.1	81	77	14-147	3	41	
Acenaphthylene	ug/kg	6.7	41.8	42.6	41.0	38.8	82	76	17-144	5	47	
Anthracene	ug/kg	14.4	41.8	42.6	38.0	36.6	56	52	10-151	4	49	
Benzo(a)anthracene	ug/kg	ND	41.8	42.6	27.9	18.3	58	34	19-153	42	49	
Benzo(a)pyrene	ug/kg	ND	41.8	42.6	19.9	11.4	43	22	10-143	55	49	R1
Benzo(b)fluoranthene	ug/kg	4.4	41.8	42.6	27.1	18.3	54	33	10-153	38	49	
Benzo(g,h,i)perylene	ug/kg	ND	41.8	42.6	16.4	8.4	39	20	10-149	65	49	R1
Benzo(k)fluoranthene	ug/kg	ND	41.8	42.6	21.9	13.3	47	26	24-153	49	49	
Chrysene	ug/kg	7.0	41.8	42.6	30.1	21.0	55	33	10-153	36	48	
Dibenz(a,h)anthracene	ug/kg	ND	41.8	42.6	14.8	7.1	35	17	10-153	71	46	R1
Fluoranthene	ug/kg	32.5	41.8	42.6	55.1	55.1	54	53	14-153	0	50	
Fluorene	ug/kg	15.9	41.8	42.6	46.4	47.4	73	74	16-149	2	44	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	41.8	42.6	15.2	7.4	36	17	10-155	69	48	R1
Naphthalene	ug/kg	113	41.8	42.6	87.6	88.7	-60	-56	11-151	1	49	M1
Phenanthrene	ug/kg	78.3	41.8	42.6	76.8	99.4	-4	50	10-159	26	48	M1
Pyrene	ug/kg	24.4	41.8	42.6	49.8	44.4	61	47	13-150	12	47	
2-Fluorobiphenyl (S)	%						82	149	47-120			S0
Terphenyl-d14 (S)	%						75	59	42-127			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: OEXT/46865 | Analysis Method: EPA 8270
QC Batch Method: EPA 3546 | Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1468595 | Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
1,3-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
1,4-Dichlorobenzene	ug/kg	ND	322	10/30/14 22:26	
2,4-Dimethylphenol	ug/kg	ND	322	10/30/14 22:26	
2,4-Dinitrophenol	ug/kg	ND	1630	10/30/14 22:26	
2-Methylphenol(o-Cresol)	ug/kg	ND	322	10/30/14 22:26	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	322	10/30/14 22:26	
4-Nitrophenol	ug/kg	ND	1630	10/30/14 22:26	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	322	10/30/14 22:26	
Di-n-butylphthalate	ug/kg	ND	322	10/30/14 22:26	
Diethylphthalate	ug/kg	ND	322	10/30/14 22:26	
Dimethylphthalate	ug/kg	ND	322	10/30/14 22:26	
Phenol	ug/kg	ND	322	10/30/14 22:26	
Pyridine	ug/kg	ND	322	10/30/14 22:26	
Quinoline	ug/kg	ND	322	10/30/14 22:26	
2,4,6-Tribromophenol (S)	%	77	36-120	10/30/14 22:26	
2-Fluorobiphenyl (S)	%	86	20-159	10/30/14 22:26	
2-Fluorophenol (S)	%	82	38-120	10/30/14 22:26	
Nitrobenzene-d5 (S)	%	82	15-155	10/30/14 22:26	
Phenol-d6 (S)	%	80	44-120	10/30/14 22:26	
Terphenyl-d14 (S)	%	92	18-160	10/30/14 22:26	

LABORATORY CONTROL SAMPLE: 1468596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/kg	1650	1390	84	56-120	
1,3-Dichlorobenzene	ug/kg	1650	1360	83	55-120	
1,4-Dichlorobenzene	ug/kg	1650	1380	84	54-120	
2,4-Dimethylphenol	ug/kg	1650	967	59	35-120	
2,4-Dinitrophenol	ug/kg	1650	1130J	69	10-120	
2-Methylphenol(o-Cresol)	ug/kg	1650	1400	85	53-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1650	1440	87	55-120	
4-Nitrophenol	ug/kg	1650	1350J	82	54-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1650	1520	92	59-120	
Di-n-butylphthalate	ug/kg	1650	1490	90	59-120	
Diethylphthalate	ug/kg	1650	1450	88	58-120	
Dimethylphthalate	ug/kg	1650	1460	88	59-120	
Phenol	ug/kg	1650	1430	87	56-120	
Pyridine	ug/kg	1650	814	49	25-120	
Quinoline	ug/kg	1650	1220	74	50-150	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

LABORATORY CONTROL SAMPLE: 1468596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Tribromophenol (S)	%			91	36-120	
2-Fluorobiphenyl (S)	%			91	20-159	
2-Fluorophenol (S)	%			88	38-120	
Nitrobenzene-d5 (S)	%			90	15-155	
Phenol-d6 (S)	%			90	44-120	
Terphenyl-d14 (S)	%			95	18-160	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468597 1468598

Parameter	Units	60180688003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichlorobenzene	ug/kg	ND	2000	2020	1630	1600	82	79	42-120	2	29	
1,3-Dichlorobenzene	ug/kg	ND	2000	2020	1590	1560	80	77	42-120	2	29	
1,4-Dichlorobenzene	ug/kg	ND	2000	2020	1620	1570	81	78	42-120	3	30	
2,4-Dimethylphenol	ug/kg	ND	2000	2020	1710	1630	85	81	21-121	5	33	
2,4-Dinitrophenol	ug/kg	ND	2000	2020	ND	ND	0	0	10-120		35	M1
2-Methylphenol(o-Cresol)	ug/kg	ND	2000	2020	1670	1660	84	82	37-120	1	32	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	2000	2020	1680	1670	84	82	37-120	1	33	
4-Nitrophenol	ug/kg	ND	2000	2020	1560J	1460J	78	72	23-127		30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	2000	2020	1870	1840	94	91	42-127	2	32	
Di-n-butylphthalate	ug/kg	ND	2000	2020	1770	1780	88	88	41-120	1	33	
Diethylphthalate	ug/kg	ND	2000	2020	1700	1630	85	81	43-120	4	29	
Dimethylphthalate	ug/kg	ND	2000	2020	1720	1640	86	81	34-120	5	29	
Phenol	ug/kg	ND	2000	2020	1680	1640	84	81	38-120	3	31	
Pyridine	ug/kg	ND	2000	2020	997	969	50	48	10-120	3	29	
Quinoline	ug/kg	ND	2000	2020	1530	1450	77	72	50-150	5	30	
2,4,6-Tribromophenol (S)	%						88	82	36-120			
2-Fluorobiphenyl (S)	%						88	83	20-159			
2-Fluorophenol (S)	%						82	81	38-120			
Nitrobenzene-d5 (S)	%						72	68	15-155			
Phenol-d6 (S)	%						83	82	44-120			
Terphenyl-d14 (S)	%						93	91	18-160			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: OEXT/46864 Analysis Method: OA2
QC Batch Method: EPA 3546 Analysis Description: OA2 GCS
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

METHOD BLANK: 1468589 Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel	mg/kg	ND	9.8	10/30/14 19:33	
Fuel Oil	mg/kg	ND	9.8	10/30/14 19:33	
Jet Fuel	mg/kg	ND	9.8	10/30/14 19:33	
Kerosene	mg/kg	ND	9.8	10/30/14 19:33	
Mineral Spirits	mg/kg	ND	9.8	10/30/14 19:33	
Motor Oil	mg/kg	ND	9.8	10/30/14 19:33	
TEH as Diesel No.2	mg/kg	ND	9.8	10/30/14 19:33	
n-Tetracosane (S)	%	75	46-147	10/30/14 19:33	
p-Terphenyl (S)	%	85	41-149	10/30/14 19:33	

LABORATORY CONTROL SAMPLE: 1468590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel	mg/kg	81.9	82.0	100	73-131	
n-Tetracosane (S)	%			82	46-147	
p-Terphenyl (S)	%			90	41-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1468591 1468592

Parameter	Units	60180688002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Fuel	mg/kg	ND	107	104	340	223	318	214	60-140	42	32	M1,R1
n-Tetracosane (S)	%						98	70	46-147			
p-Terphenyl (S)	%						98	73	41-149			

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: PMST/10164
Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60180689002, 60180689003

METHOD BLANK: 1468609
Matrix: Solid
Associated Lab Samples: 60180689002, 60180689003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	10/28/14 00:00	

SAMPLE DUPLICATE: 1468610

Parameter	Units	60180770001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.4	20.3	1	20	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: PMST/10165 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60180689004, 60180689005, 60180689006

METHOD BLANK: 1468611 Matrix: Solid
Associated Lab Samples: 60180689004, 60180689005, 60180689006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	10/28/14 00:00	

SAMPLE DUPLICATE: 1468612

Parameter	Units	60180689004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.7	22.4	1	20	

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QUALITY CONTROL DATA

Project: KDHE NEODESHA
Pace Project No.: 60180689

QC Batch: WET/51317 Analysis Method: EPA 9045
QC Batch Method: EPA 9045 Analysis Description: 9045 pH
Associated Lab Samples: 60180689002, 60180689003, 60180689004, 60180689005, 60180689006

SAMPLE DUPLICATE: 1472106

Parameter	Units	60180689006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.7	0	3	H3

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QUALIFIERS

Project: KDHE NEODESHA
Pace Project No.: 60180689

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.

PQL - Practical Quantitation Limit.

RL - Reporting 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

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City
PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: MSV/29163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65433

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65434

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65456

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/65458

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e	Data for Ethanol by 8260 is reported after an initial calibration verification with low recovery. Sample was re-analyzed outside of hold under compliant QC conditions and the data has been confirmed.
2e	Post Digestion Spike Performed - 87% Recovery
3e	Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.
4e	Samples were rr out of hold after a compliant ICV with the same results for Ethanol.

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Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: KDHE NEODESHA
Pace Project No.: 60180689

ANALYTE QUALIFIERS

5e	The sample does not match a profile of laboratory standards. Hydrocarbon fractions are present from the mid diesel fuel to late motor oil range. Quantitation achieved using diesel fuel as a reference standard.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60180689002	**MW-148 SS1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180689003	**MW-148 SS2**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180689004	**MW-171 SS1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180689005	**MW-171 SS2**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180689006	**DUP-1**	EPA 3546	OEXT/46864	OA2	GCSV/17881
60180689002	**MW-148 SS1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180689003	**MW-148 SS2**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180689004	**MW-171 SS1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180689005	**MW-171 SS2**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180689006	**DUP-1**	EPA 3050	MPRP/29467	EPA 6010	ICP/22124
60180689002	**MW-148 SS1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180689003	**MW-148 SS2**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180689004	**MW-171 SS1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180689005	**MW-171 SS2**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180689006	**DUP-1**	EPA 7471	MERP/8938	EPA 7471	MERC/8893
60180689002	**MW-148 SS1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180689003	**MW-148 SS2**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180689004	**MW-171 SS1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180689005	**MW-171 SS2**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180689006	**DUP-1**	EPA 3546	OEXT/46866	EPA 8270 by SIM	MSSV/15091
60180689002	**MW-148 SS1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180689003	**MW-148 SS2**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180689004	**MW-171 SS1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180689005	**MW-171 SS2**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180689006	**DUP-1**	EPA 3546	OEXT/46865	EPA 8270	MSSV/15090
60180689001	**TB10172014B**	OA1	MSV/65434		
60180689002	**MW-148 SS1**	OA1	MSV/65434		
60180689003	**MW-148 SS2**	OA1	MSV/65434		
60180689004	**MW-171 SS1**	OA1	MSV/65434		
60180689005	**MW-171 SS2**	OA1	MSV/65456		
60180689006	**DUP-1**	OA1	MSV/65434		
60180689002	**MW-148 SS1**	EPA 5035A	MSV/29098	EPA 8260	MSV/29163
60180689003	**MW-148 SS2**	EPA 5035A	MSV/29098	EPA 8260	MSV/29163
60180689004	**MW-171 SS1**	EPA 5035A	MSV/29098	EPA 8260	MSV/29163
60180689005	**MW-171 SS2**	EPA 5035A	MSV/29098	EPA 8260	MSV/29163
60180689006	**DUP-1**	EPA 5035A	MSV/29098	EPA 8260	MSV/29163
60180689001	**TB10172014B**	EPA 8260	MSV/65433		
60180689002	**MW-148 SS1**	EPA 8260	MSV/65433		
60180689003	**MW-148 SS2**	EPA 8260	MSV/65433		
60180689004	**MW-171 SS1**	EPA 8260	MSV/65433		
60180689005	**MW-171 SS2**	EPA 8260	MSV/65458		
60180689006	**DUP-1**	EPA 8260	MSV/65433		
60180689002	**MW-148 SS1**	ASTM D2974	PMST/10164		

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KDHE NEODESHA
Pace Project No.: 60180689

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60180689003	**MW-148 SS2**	ASTM D2974	PMST/10164		
60180689004	**MW-171 SS1**	ASTM D2974	PMST/10165		
60180689005	**MW-171 SS2**	ASTM D2974	PMST/10165		
60180689006	**DUP-1**	ASTM D2974	PMST/10165		
60180689002	**MW-148 SS1**	EPA 9045	WET/51317		
60180689003	**MW-148 SS2**	EPA 9045	WET/51317		
60180689004	**MW-171 SS1**	EPA 9045	WET/51317		
60180689005	**MW-171 SS2**	EPA 9045	WET/51317		
60180689006	**DUP-1**	EPA 9045	WET/51317		

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Sample Condition Upon Receipt

WO#: 60180689
0180689

Client Name: B; M

Optional
Proj Due Date:
Proj Name:

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

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☐ No ☑ Seals intact: ~~Yes ☑~~ No ☑ PV 10/18

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☑ None ☐ Other ☑ 2 pic

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 3.8

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 10/18/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. K, TS
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☑Yes	☐No	☐N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: SL	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): 072814-3	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☐No	☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☑No	☐N/A	17. List State: KS

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Volume Not Received for MS/MSD-8260

Project Manager Review: AAF for AKB Date: 10/18/14

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1721658

Section A Required Client Information:

Company: Burns & McDonnell
Address: 9400 Ward Parkway KC, MO 64114
Email To: Trevor Gustafson
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Trevor Gustafson
Copy To: Chris Hoglund
Purchase Order No.:
Project Name: KDHE Neodesha
Project Number: 80435

Section C Invoice Information:

Attention: Trevor Gustafson
Company Name: BMcD
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: KS

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): 8014, RCRA 8	OA2, PAH, SVOC	VOC 8260	OA45, OA1	Ethanol	Moisture							Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB 10172014B	WT	G			10/17/14	0850		2				2							X				2VGAU							01
2	MW-148 SS1	SL	G				1440		7	5					1	1		X	X	X	X	X	X		1BGAU	1BGAB	1BPBU	1WGFU	1WGKU		02
3	MW-148 SS2	SL					1455		7	5					1	1		X	X	X	X	X	X								03
4	MW-171 SS1	SL	G				1645		7	5					1	1		X	X	X	X	X	X								04
5	MW-171 SS2	SL					1655		7	5					1	1		X	X	X	X	X	X								05
6	DUP-1	SL					—		7	5					1	1		X	X	X	X	X	X								06
7																															
8																															
9																															
10																															
11																															
12																															

60180689

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Chris Hoglund BMcD	10/18/14	~~0940~~ 0940	[signature]	10/18/14	0940	3.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CHRIS HOGLUND
SIGNATURE of SAMPLER: Chris Hoglund
DATE Signed (MM/DD/YY): 10/18/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Chain of Custody

1028639

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Workorder: 60180689 **Workorder Name:** KDHE NEODESHA **Owner Received Date:** 10/18/2014 **Results Requested By:** 11/3/2014

Report To	Subcontract To
Angie Brown Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665 Fax (913)599-1759	Pace Analytical Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414 Phone (612)607-1700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: none	Requested Analysis: Ethanol EPA 8260	LAB USE ONLY
1	MW-148 SS1	PS	10/17/2014 14:40	60180689002	Solid	1	X	001
2	MW-148 SS2	PS	10/17/2014 14:55	60180689003	Solid	1	X	002
3	MW-171 SS1	PS	10/17/2014 16:45	60180689004	Solid	1	X	003
4	MW-171 SS2	PS	10/17/2014 16:55	60180689005	Solid	1	X	004
5	DUP-1	PS	10/17/2014 08:00	60180689006	Solid	1	X	005

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	10/18/14 1700	[signature] PAE	10-23-14 945
2				
3				

Comments: FROZEN

Cooler Temperature on Receipt 0.9 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: **F-MN-L-213-rev.09**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace KS

Project #: WO#: 10286319

10286319

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

Tracking Number: 611352823594

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:

Temp Blank? ☒ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☐ B88A912167504 ☒ B88A9132521491

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

Cooler Temp Read (°C): 0.7 **Cooler Temp Corrected (°C):** 0.9 **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.2 **Date and Initials of Person Examining Contents:** 10-23-14 AA

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: SL	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐ Yes	☒ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Kulu Xiong **Date:** Oct. 24, 2014

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)

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689001 Client Smp ID: TB10172014B
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 13:42

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	35.6	J

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689002 Client Smp ID: MW-148 SS1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 15:30

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	431	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689003 Client Smp ID: MW-148 SS2
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 15:45

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	221	J

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689004 Client Smp ID: MW-171 SS1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 16:01

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	0.938	218	_J__

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689005 Client Smp ID: MW-171 SS2
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 31-OCT-2014 16:07

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 560-21-4	Pentane, 2,3,3-trimethyl-	4.841	96.1	NJ
2. 13151-34-3	Decane, 3-methyl-	7.973	68.1	NJ
3. 17312-55-9	Decane, 3,8-dimethyl-	8.105	72.7	NJ
4. 108-87-2	Cyclohexane, methyl-	8.381	42.4	NJ
5. 112-40-3	Dodecane	8.716	61.6	NJ
6. 17301-23-4	Undecane, 2,6-dimethyl-	8.818	52.3	NJ
7. 54411-12-0	Benzene, (2-chloro-2-buteny	9.092	113	NJ
8. 17057-82-8	1H-Indene, 2,3-dihydro-1,2-	9.584	44.9	NJ
9. 54340-87-3	1H-Indene, 2,3-dihydro-1,4,	9.732	44.4	NJ
10. 6117-97-1	Dodecane, 4-methyl-	10.461	46.4	NJ

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: Burns and McDonnell_18-OCT-2014 09:40 Client SDG: 6018068
Lab Smp Id: 60180689006 Client Smp ID: DUP-1
Operator : JKL Sample Date: 17-OCT-2014
Sample Location: Sample Point:
Sample Matrix: SOIL Date Received:18-OCT-2014 09:40
Analysis Type: VOA Level: LOW
Inj Date: 30-OCT-2014 16:31

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	0.941	777	J
2.	560-21-4	Pentane, 2,3,3-trimethyl-	4.841	292	NJ
3.	17302-37-3	Decane, 2,2-dimethyl-	7.381	154	NJ
4.	13151-34-3	Decane, 3-methyl-	7.979	167	NJ
5.	0-00-0	2-Hexyl-1-octanol	8.127	112	NJ
6.	2051-30-1	Octane, 2,6-dimethyl-	8.526	156	NJ
7.		Unknown	9.481	293	J
8.	31081-18-2	Nonane, 3-methyl-5-propyl-	9.764	211	NJ
9.	54105-66-7	Cyclohexane, undecyl-	9.850	113	NJ
10.	13475-82-6	Heptane, 2,2,4,6,6-pentamet	9.905	264	NJ