



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center  
Office of Analytical Services and Quality Assurance  
701 Mapes Road  
Fort Meade, Maryland 20755-5350



**Final Analytical Report**

Site Name.....	TCE Havertown
Sample Collection Date(s).....	03/01/11 00:00- 03/02/11 16:16
Contact.....	Ruth Scharr
Report Date.....	04/15/11 10:08
Project #.....	DAS R33647
Work Order.....	1103006

**Analyses included in this report:**

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VOCs by TO-15, TO-15 list (ESAT)

Approved for Release

OASQA Representative

1103006 FINAL

DAS R33647

04 15 11 1008

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Office of Analytical Services and Quality Assurance  
701 Mapes Road  
Fort Meade, Maryland 20755-5350



**Site Name: TCE Havertown**

**Project #: DAS R33647**

**Report Narrative**

Quantitation Limit for all sample results is reported as ppbv.

Field Samples TB-001-01-20110301-04 and FB-001-01-20110301-03, OASQA Laboratory Numbers 1103006-24 and 1103006-25, respectively, could not be analyzed because the canisters for these samples were still under "absolute vacuum" upon receipt at the laboratory.



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701 Mapes Road  
Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown

Project #: DAS R33647

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled Begin	Date Sampled End	Date Received
SS-014-01-20110301-01	1103006-01	Air	3/01/11 11:22	3/02/11 11:12	3/04/11 12:40
FF-014-01-20110301-01	1103006-02	Air	3/01/11 11:29	3/02/11 11:10	3/04/11 12:40
BS-014-01-20110301-01	1103006-03	Air	3/01/11 11:35	3/02/11 11:11	3/04/11 12:40
OA-047-01-20110301-01	1103006-04	Air	3/01/11 12:00	3/02/11 11:35	3/04/11 12:40
CS-011-01-20110301-01	1103006-05	Air	3/01/11 12:15	3/02/11 11:47	3/04/11 12:40
LL-051-01-20110301-01	1103006-06	Air	3/01/11 14:20	3/02/11 12:53	3/04/11 12:40
SS-051-01-2011030101-02	1103006-07	Air	3/01/11 14:17	3/02/11 12:51	3/04/11 12:40
SS-051-01-20110301-01	1103006-08	Air	3/01/11 14:17	3/02/11 12:51	3/04/11 12:40
FF-051-01-20110301-01	1103006-09	Air	3/01/11 14:25	3/02/11 12:49	3/04/11 12:40
CS-047-01-20110301-01	1103006-10	Air	3/01/11 12:38	3/02/11 12:16	3/04/11 12:40
FF-047-01-20110301-01	1103006-11	Air	3/01/11 12:49	3/02/11 12:19	3/04/11 12:40
FF-047-01-20110301-02	1103006-12	Air	3/01/11 12:49	3/02/11 12:19	3/04/11 12:40
LL-047-01-20110301-01	1103006-13	Air	3/01/11 12:46	3/02/11 12:14	3/04/11 12:40
SS-053-01-20110301-01	1103006-14	Air	3/01/11 14:54	3/02/11 16:16	3/04/11 12:40
BS-053-01-20110301-01	1103006-15	Air	3/01/11 15:00	3/02/11 16:16	3/04/11 12:40
FF-053-01-20110301-01	1103006-16	Air	3/01/11 15:10	3/02/11 16:16	3/04/11 12:40
LL-018-20110301-01	1103006-17	Air	3/01/11 15:48	3/02/11 14:56	3/04/11 12:40
CS-018-01-20110301-01	1103006-18	Air	3/01/11 15:43	3/02/11 14:57	3/04/11 12:40
FF-018-01-20110301-01	1103006-19	Air	3/01/11 15:52	3/02/11 15:05	3/04/11 12:40
SS-018-01-20110301-01	1103006-20	Air	3/01/11 16:03	3/02/11 15:37	3/04/11 12:40
CS-206-01-20110301-01	1103006-21	Air	3/01/11 16:15	3/02/11 15:27	3/08/11 10:50
LL-206-01-20110301-01	1103006-22	Air	3/01/11 16:13	3/02/11 15:26	3/04/11 12:40
FF-206-01-20110301-01	1103006-23	Air	3/01/11 16:20	3/02/11 15:28	3/08/11 10:50
TB-001-01-20110301-04	1103006-24	Air	3/01/11 00:00	3/01/11 00:00	3/04/11 12:40
FB-001-01-20110301-03	1103006-25	Air	3/02/11 00:00	3/02/11 00:00	3/04/11 12:40



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Site Name: TCE Havertown

Project #: DAS R33647

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USEPA

CHAIN OF CUSTODY RECORD

No: 3-030311-130056-0001

Date Shipped: 3/3/2011

Site #: A3LU

Cooler #: 1-13

Carrier Name: FedEx

Contact Name: John Kwedar

Lab: Fort Meade

Airbill No: J11101012220225

Contact Phone: 410-305-3021

Lab Phone: 410-305-3021

Table with columns: Lab #, Sample #, CLP Sample #, Tag, Analyses, Matrix, Collected, Num b Cont, Container, Pump #, OrificeID, Start Pressure, Stop Pressure, Start Time, Stop Time. Contains 10 rows of sample data.

Special Instructions: 1 Un-used Summa and 3 boxes of Regulators Have also been returned under the same Airbill No.
SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Table with columns: Items/Reason, Relinquished by, Date, Received by, Date, Time. Contains one row of handwritten data: Relinquished by [Signature], Date 3/3/11, Received by [Signature], Date 3/4/11, Time 12:40.



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Site Name: TCE Havertown Project #: DAS R33647

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USEPA

Date Shipped: 3/3/2011
Carrier Name: FedEx
Airbill No: J11101012220225

CHAIN OF CUSTODY RECORD

Site #: A3LU
Contact Name: John Kwedar
Contact Phone: 410-305-3021

No: 3-030311-130056-0001

Cooler #: 1-13
Lab: Fort Meade
Lab Phone: 410-305-3021

Table with columns: Lab #, Sample #, CLP Sample #, Tag, Analyses, Matrix, Collected, Num b Cont, Container, Pump #, OrificeID, Start Pressure, Stop Pressure, Start Time, Stop Time. Contains 10 rows of sample data.

Special Instructions: 1 Un-used Summa and 3 boxes of Regulators Have also been returned under the same Airbill No.
SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Table for Chain of Custody with columns: Items/Reason, Relinquished by, Date, Received by, Date, Time. Includes handwritten entry for 3/3/11 and 3/4/11.



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Site Name: TCE Havertown

Project #: DAS R33647

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USEPA

Date Shipped: 3/3/2011

Carrier Name: FedEx

Airbill No: J11101012220225

CHAIN OF CUSTODY RECORD

Site #: A3LU

Contact Name: John Kwedar

Contact Phone: 410-305-3021

No: 3-030311-130056-0001

Cooler #: 1-13

Lab: Fort Meade

Lab Phone: 410-305-3021

Table with columns: Lab #, Sample #, CLP Sample #, Tag, Analyses, Matrix, Collected, Num b Cont, Container, Pump #, OrificeID, Start Pressure, Stop Pressure, Start Time, Stop Time. Includes handwritten sample IDs like 1103006-21, 1103006-22, 1103006-23, 1103006-24, 1103006-25.

Special Instructions: 1 Un-used Summa and 3 boxes of Regulators Have also been returned under the same Airbill No.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Table with columns: Items/Reason, Relinquished by, Date, Received by, Date, Time, Items/Reason, Relinquished By, Date, Received by, Date, Time. Includes handwritten signatures and dates.

\* Samples received from FedEx 3/8/11 10:50 PK 3/9/11



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USEPA

Date Shipped: 3/3/2011

Carrier Name: FedEx

Airbill No: J11101012220225

CHAIN OF CUSTODY RECORD

Site #: A3LU

Contact Name: John Kwedar

Contact Phone: 410-305-3021

No: 3-030311-130056-0001

Cooler #: 1-13

Lab: Fort Meade

Lab Phone: 410-305-3021

Table with columns: Lab #, Sample #, CLP Sample #, Tag, Analyses, Matrix, Collected, Num, Container, Pump #, OrificeID, Start Press, Stop Press, Start Time, Stop Time. Includes handwritten lab numbers 1103006-21 and 1103006-23.

Special Instructions: 1 Un-used Summa and 3 boxes of Regulators Have also been returned under the same Airbill No.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Table with columns: Items/Reason, Relinquished by, Date, Received by, Date, Time. Includes handwritten signatures and dates.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> SS-014-01-20110301-01	<b>Lab ID:</b> 1103006-01
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	2.6	6.33	1.0		1	03/07/11 21:03	TO-15/R3QA230
Benzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
<b>2-Butanone</b>	0.4	1.25	1.0	J	1	03/07/11 21:03	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Chloroform	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Chloromethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Cyclohexane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Dichlorodifluoromethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> SS-014-01-20110301-01	<b>Lab ID:</b> 1103006-01
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
<b>Ethanol</b>	7.3	13.89	1.0	K	1	03/07/11 21:03	TO-15/R3QA230
Ethyl Acetate	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Heptane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Hexane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Propylene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Styrene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
<b>Toluene</b>	0.3	1.22	1.0	J	1	03/07/11 21:03	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
<b>Trichloroethene</b>	0.2	1.19	1.0	J	1	03/07/11 21:03	TO-15/R3QA230
Trichlorofluoromethane	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/07/11 21:03	TO-15/R3QA230
m,p-Xylene	U	U	2.0		1	03/07/11 21:03	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: SS-014-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-01, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values U, U, 1.0, 1, 03/07/11 21:03, TO-15/R3QA230.

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values 9.38, 94 %, 80-120, 03/07/11, 03/07/11 21:03, TO-15/R3QA230.



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Site Name: TCE Havertown Project #: DAS R33647
Station ID: FF-014-01-20110301-01 Lab ID: 1103006-02
Sample Matrix: Air Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-014-01-20110301-01

Lab ID: 1103006-02

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: FF-014-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-02, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: U, U, 5.0, 5, 03/07/11 23:06, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 9.54, 95 %, 80-120, 03/07/11, 03/07/11 23:06, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: BS-014-01-20110301-01

Lab ID: 1103006-03

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: BS-014-01-20110301-01

Lab ID: 1103006-03

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> BS-014-01-20110301-01	<b>Lab ID:</b> 1103006-03
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
o-Xylene	U	U	2.0		2	03/08/11 00:24	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	9.66		<b>97 %</b>	<i>80-120</i>	03/07/11	03/08/11 00:24	<i>TO-15/R3QA230</i>



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> OA-047-01-20110301-01	<b>Lab ID:</b> 1103006-04
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	1.6	3.74	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Benzene</b>	0.2	0.74	1.0	J	1	03/07/11 21:45	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
2-Butanone	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Chloroform	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Chloromethane</b>	0.5	1.08	1.0	J	1	03/07/11 21:45	TO-15/R3QA230
Cyclohexane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.5	2.39	1.0	J	1	03/07/11 21:45	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center  
Office of Analytical Services and Quality Assurance  
701 Mapes Road  
Fort Meade, Maryland 20755-5350

**Site Name:** TCE Havertown**Project #:** DAS R33647**Station ID:** OA-047-01-20110301-01**Lab ID:** 1103006-04**Sample Matrix:** Air**Date Collected:** 03/02/2011**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Ethanol</b>	2.7	5.06	1.0	K	1	03/07/11 21:45	TO-15/R3QA230
Ethyl Acetate	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Heptane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Hexane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Propylene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Styrene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Toluene</b>	0.3	1.06	1.0	J	1	03/07/11 21:45	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.2	1.36	1.0	J	1	03/07/11 21:45	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/07/11 21:45	TO-15/R3QA230
<b>m,p-Xylene</b>	0.3	1.14	2.0	J	1	03/07/11 21:45	TO-15/R3QA230



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701 Mapes Road
Fort Meade, Maryland 20755-5350



Table with site information: Site Name: TCE Havertown, Station ID: OA-047-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-04, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: U, U, 1.0, 1, 03/07/11 21:45, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 9.52, 95 %, 80-120, 03/07/11, 03/07/11 21:45, TO-15/R3QA230



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> CS-011-01-20110301-01	<b>Lab ID:</b> 1103006-05
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	6.0	14.30	1.0		1	03/07/11 22:27	TO-15/R3QA230
<b>Benzene</b>	0.4	1.13	1.0	J	1	03/07/11 22:27	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
<b>2-Butanone</b>	2.4	7.11	1.0		1	03/07/11 22:27	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
<b>Chloroform</b>	0.2	1.03	1.0	J	1	03/07/11 22:27	TO-15/R3QA230
<b>Chloromethane</b>	1.0	1.98	1.0		1	03/07/11 22:27	TO-15/R3QA230
Cyclohexane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.5	2.64	1.0	J	1	03/07/11 22:27	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown

Project #: DAS R33647

Station ID: CS-011-01-20110301-01

Lab ID: 1103006-05

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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 Office of Analytical Services and Quality Assurance  
 701 Mapes Road  
 Fort Meade, Maryland 20755-5350



<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> CS-011-01-20110301-01	<b>Lab ID:</b> 1103006-05
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
o-Xylene	U	U	1.0		1	03/07/11 22:27	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	9.82		<b>98 %</b>	<i>80-120</i>	03/07/11	03/07/11 22:27	<i>TO-15/R3QA230</i>



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 701 Mapes Road  
 Fort Meade, Maryland 20755-5350



<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-051-01-20110301-01	<b>Lab ID:</b> 1103006-06
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	6.1	14.52	1.0		1	03/08/11 22:29	TO-15/R3QA230
<b>Benzene</b>	0.3	1.03	1.0	J	1	03/08/11 22:29	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
<b>2-Butanone</b>	1.0	2.86	1.0		1	03/08/11 22:29	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
<b>Chloroform</b>	0.4	1.77	1.0	J	1	03/08/11 22:29	TO-15/R3QA230
<b>Chloromethane</b>	0.8	1.75	1.0	J	1	03/08/11 22:29	TO-15/R3QA230
<b>Cyclohexane</b>	0.2	0.76	1.0	J	1	03/08/11 22:29	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.5	2.59	1.0	J	1	03/08/11 22:29	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown

Project #: DAS R33647

Station ID: LL-051-01-20110301-01

Lab ID: 1103006-06

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like Ethanol, Hexane, Toluene, etc., with their respective results and limits.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-051-01-20110301-01	<b>Lab ID:</b> 1103006-06
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
o-Xylene	U	U	1.0		1	03/08/11 22:29	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	9.98		<b>100 %</b>	<i>80-120</i>	03/07/11	03/08/11 22:29	<i>TO-15/R3QA230</i>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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701 Mapes Road
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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: SS-051-01-2011030101-02

Lab ID: 1103006-07

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: SS-051-01-2011030101-02

Lab ID: 1103006-07

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like Ethanol, Ethylbenzene, Heptane, Hexane, etc.



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Table with 2 columns: Site Name, Station ID, Sample Matrix, Project #, Lab ID, Date Collected. Values include TCE Havertown, SS-051-01-2011030101-02, Air, DAS R33647, 1103006-07, 03/02/2011.

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values U, U, 1.0, 1, 03/08/11 12:31, TO-15/R3QA230.

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values 9.71, 97 %, 80-120, 03/07/11, 03/08/11 12:31, TO-15/R3QA230.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: SS-051-01-20110301-01

Lab ID: 1103006-08

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown

Project #: DAS R33647

Station ID: SS-051-01-20110301-01

Lab ID: 1103006-08

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethylbenzene, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: SS-051-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-08, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: 0.3, 1.36, 1.0, J, 1, 03/08/11 09:01, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 10.2, 102 %, 80-120, 03/07/11, 03/08/11 09:01, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-051-01-20110301-01

Lab ID: 1103006-09

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-051-01-20110301-01

Lab ID: 1103006-09

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: FF-051-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-09, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values U, U, 1.0, 1, 03/09/11 05:56, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values 10.1, 101 %, 80-120, 03/07/11, 03/09/11 05:56, TO-15/R3QA230



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Site Name: TCE Havertown Project #: DAS R33647
Station ID: CS-047-01-20110301-01 Lab ID: 1103006-10
Sample Matrix: Air Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: CS-047-01-20110301-01

Lab ID: 1103006-10

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: CS-047-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-10, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values U, U, 1.0, 1, 03/08/11 09:42, TO-15/R3QA230.

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values 9.72, 97 %, 80-120, 03/07/11, 03/08/11 09:42, TO-15/R3QA230.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-047-01-20110301-01

Lab ID: 1103006-11

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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**Site Name:** TCE Havertown

**Project #:** DAS R33647

**Station ID:** FF-047-01-20110301-01

**Lab ID:** 1103006-11

**Sample Matrix:** Air

**Date Collected:** 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Ethanol</b>	161	305.99	10.0	K	10	03/10/11 15:11	TO-15/R3QA230
Ethyl Acetate	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Heptane</b>	0.2	1.03	1.0	J	1	03/08/11 23:51	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Hexane</b>	0.2	0.85	1.0	J	1	03/08/11 23:51	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Methylene Chloride</b>	0.6	2.28	1.0	J	1	03/08/11 23:51	TO-15/R3QA230
Propylene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Styrene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Toluene</b>	1.8	6.69	1.0		1	03/08/11 23:51	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.3	1.53	1.0	J	1	03/08/11 23:51	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/08/11 23:51	TO-15/R3QA230
<b>m,p-Xylene</b>	0.4	1.58	2.0	J	1	03/08/11 23:51	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: FF-047-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-11, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: U, U, 1.0, 1, 03/08/11 23:51, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 9.88, 99 %, 80-120, 03/07/11, 03/08/11 23:51, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-047-01-20110301-02

Lab ID: 1103006-12

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-047-01-20110301-02

Lab ID: 1103006-12

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> FF-047-01-20110301-02	<b>Lab ID:</b> 1103006-12
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
o-Xylene	U	U	1.0		1	03/09/11 01:14	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	10.1		<b>101 %</b>	<i>80-120</i>	03/07/11	03/09/11 01:14	<i>TO-15/R3QA230</i>



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-047-01-20110301-01	<b>Lab ID:</b> 1103006-13
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	7.5	18.04	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Benzene</b>	0.3	1.03	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>2-Butanone</b>	1.8	5.35	1.0		1	03/09/11 02:35	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Chloroform	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Chloromethane</b>	0.6	1.25	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
Cyclohexane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>1,4-Dichlorobenzene</b>	0.4	2.67	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.6	3.24	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-047-01-20110301-01	<b>Lab ID:</b> 1103006-13
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Ethanol</b>	116	220.47	10.0	K	10	03/10/11 16:29	TO-15/R3QA230
Ethyl Acetate	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Heptane</b>	0.3	1.24	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Hexane</b>	0.2	0.75	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Methylene Chloride</b>	0.8	2.70	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
Propylene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Styrene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Toluene</b>	2.0	7.68	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.3	1.59	1.0	J	1	03/09/11 02:35	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/09/11 02:35	TO-15/R3QA230
<b>m,p-Xylene</b>	0.4	1.93	2.0	J	1	03/09/11 02:35	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: LL-047-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-13, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row: o-Xylene, U, U, 1.0, 1, 03/09/11 02:35, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row: Surrogate: Bromofluorobenzene, 10.0, 100 %, 80-120, 03/07/11, 03/09/11 02:35, TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center  
 Office of Analytical Services and Quality Assurance  
 701 Mapes Road  
 Fort Meade, Maryland 20755-5350



<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> SS-053-01-20110301-01	<b>Lab ID:</b> 1103006-14
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	26.0	62.30	10.0		10	03/10/11 17:08	TO-15/R3QA230
<b>Benzene</b>	0.3	1.06	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>2-Butanone</b>	10.6	31.47	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>Carbon disulfide</b>	0.2	0.66	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>Chlorobenzene</b>	0.2	0.98	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
Chloroform	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>Chloromethane</b>	0.5	1.04	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
<b>Cyclohexane</b>	3.6	12.60	1.0		1	03/09/11 04:36	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>1,2-Dichlorobenzene</b>	0.2	1.33	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
<b>1,4-Dichlorobenzene</b>	0.3	1.76	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.5	2.39	1.0	J	1	03/09/11 04:36	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/09/11 04:36	TO-15/R3QA230



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701 Mapes Road
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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: SS-053-01-20110301-01

Lab ID: 1103006-14

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like Ethanol, Ethylbenzene, Heptane, Hexane, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: SS-053-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-14, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: 0.3, 1.49, 1.0, J, 1, 03/09/11 04:36, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 10.2, 102 %, 80-120, 03/07/11, 03/09/11 04:36, TO-15/R3QA230



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701 Mapes Road
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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: BS-053-01-20110301-01

Lab ID: 1103006-15

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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**Site Name:** TCE Havertown**Project #:** DAS R33647**Station ID:** BS-053-01-20110301-01**Lab ID:** 1103006-15**Sample Matrix:** Air**Date Collected:** 03/02/2011**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
<b>Ethanol</b>	233	442.83	20.0	K	20	03/09/11 19:10	TO-15/R3QA230
Ethyl Acetate	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Heptane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Hexane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Propylene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Styrene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
<b>Toluene</b>	0.5	1.94	1.0	J	1	03/08/11 13:28	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.3	1.59	1.0	J	1	03/08/11 13:28	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/08/11 13:28	TO-15/R3QA230
<b>m,p-Xylene</b>	0.3	1.49	2.0	J	1	03/08/11 13:28	TO-15/R3QA230



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Fort Meade, Maryland 20755-5350



Table with site information: Site Name: TCE Havertown, Station ID: BS-053-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-15, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row: o-Xylene, U, U, 1.0, 1, 03/08/11 13:28, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row: Surrogate: Bromofluorobenzene, 9.84, 98 %, 80-120, 03/07/11, 03/08/11 13:28, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-053-01-20110301-01

Lab ID: 1103006-16

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> FF-053-01-20110301-01	<b>Lab ID:</b> 1103006-16
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
<b>Ethanol</b>	548	1,041.52	50.0	K	50	03/09/11 21:12	TO-15/R3QA230
<b>Ethyl Acetate</b>	0.7	2.62	1.0	J	1	03/08/11 14:11	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Heptane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Hexane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Propylene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Styrene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
<b>Toluene</b>	0.6	2.36	1.0	J	1	03/08/11 14:11	TO-15/R3QA230
<b>1,2,4-Trichlorobenzene</b>	0.4	2.84	1.0	J	1	03/08/11 14:11	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.3	1.64	1.0	J	1	03/08/11 14:11	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/08/11 14:11	TO-15/R3QA230
<b>m,p-Xylene</b>	0.3	1.31	2.0	J	1	03/08/11 14:11	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: FF-053-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-16, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row: o-Xylene, U, U, 1.0, 1, 03/08/11 14:11, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row: Surrogate: Bromofluorobenzene, 9.91, 99 %, 80-120, 03/07/11, 03/08/11 14:11, TO-15/R3QA230



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 Fort Meade, Maryland 20755-5350



<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-018-20110301-01	<b>Lab ID:</b> 1103006-17
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	6.3	15.17	1.0		1	03/09/11 11:07	TO-15/R3QA230
<b>Benzene</b>	0.4	1.22	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
<b>2-Butanone</b>	0.4	1.34	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
<b>Chloroform</b>	0.2	0.98	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
<b>Chloromethane</b>	0.6	1.27	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
<b>Cyclohexane</b>	0.4	1.46	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.6	2.94	1.0	J	1	03/09/11 11:07	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/09/11 11:07	TO-15/R3QA230



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Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown Project #: DAS R33647
Station ID: LL-018-20110301-01 Lab ID: 1103006-17
Sample Matrix: Air Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: LL-018-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-17, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row: o-Xylene, U, U, 1.0, 1, 03/09/11 11:07, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row: Surrogate: Bromofluorobenzene, 10.2, 102 %, 80-120, 03/07/11, 03/09/11 11:07, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: CS-018-01-20110301-01

Lab ID: 1103006-18

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: CS-018-01-20110301-01

Lab ID: 1103006-18

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc., with their respective results and limits.



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Table with site information: Site Name: TCE Havertown, Station ID: CS-018-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-18, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row: o-Xylene, U, U, 1.0, 1, 03/08/11 21:07, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row: Surrogate: Bromofluorobenzene, 9.77, 98 %, 80-120, 03/07/11, 03/08/11 21:07, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FF-018-01-20110301-01

Lab ID: 1103006-19

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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**Site Name:** TCE Havertown

**Project #:** DAS R33647

**Station ID:** FF-018-01-20110301-01

**Lab ID:** 1103006-19

**Sample Matrix:** Air

**Date Collected:** 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Ethanol</b>	103	195.76	10.0	K	10	03/09/11 22:29	TO-15/R3QA230
<b>Ethyl Acetate</b>	0.2	0.73	1.0	J	1	03/09/11 11:48	TO-15/R3QA230
Ethylbenzene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Heptane</b>	0.2	0.83	1.0	J	1	03/09/11 11:48	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Hexane</b>	0.3	1.10	1.0	J	1	03/09/11 11:48	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Propylene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Styrene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Tetrachloroethene</b>	0.4	2.53	1.0	J	1	03/09/11 11:48	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Toluene</b>	1.8	6.73	1.0		1	03/09/11 11:48	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.3	1.76	1.0	J	1	03/09/11 11:48	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/09/11 11:48	TO-15/R3QA230
<b>m,p-Xylene</b>	0.5	2.19	2.0	J	1	03/09/11 11:48	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: FF-018-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-19, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result ug/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values U, U, 1.0, 1, 03/09/11 11:48, TO-15/R3QA230.

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values 10.4, 104 %, 80-120, 03/07/11, 03/09/11 11:48, TO-15/R3QA230.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> SS-018-01-20110301-01	<b>Lab ID:</b> 1103006-20
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	1.0	2.42	1.0		1	03/08/11 14:52	TO-15/R3QA230
Benzene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
2-Butanone	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Chloroform	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Chloromethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Cyclohexane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.6	2.94	1.0	J	1	03/08/11 14:52	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/08/11 14:52	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: SS-018-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-20, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Main data table with columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc.



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Table with site information: Site Name: TCE Havertown, Station ID: SS-018-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-20, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: U, U, 1.0, 1, 03/08/11 14:52, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 9.80, 98 %, 80-120, 03/07/11, 03/08/11 14:52, TO-15/R3QA230



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> CS-206-01-20110301-01	<b>Lab ID:</b> 1103006-21
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	8.5	20.32	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Benzene</b>	0.4	1.32	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>2-Butanone</b>	0.5	1.37	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Chloroform</b>	0.2	1.18	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
<b>Chloromethane</b>	0.7	1.44	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
<b>Cyclohexane</b>	0.4	1.35	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.6	2.79	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230



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**Site Name:** TCE Havertown

**Project #:** DAS R33647

**Station ID:** CS-206-01-20110301-01

**Lab ID:** 1103006-21

**Sample Matrix:** Air

**Date Collected:** 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Ethanol</b>	146	277.48	10.0	K	10	03/10/11 17:47	TO-15/R3QA230
<b>Ethyl Acetate</b>	1.6	5.85	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Ethylbenzene</b>	0.3	1.14	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
4-Ethyltoluene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Heptane</b>	0.5	1.90	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Hexane</b>	0.7	2.45	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Propylene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Styrene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Tetrahydrofuran	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Toluene</b>	1.4	5.32	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.4	2.04	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
<b>1,2,4-Trimethylbenzene</b>	0.3	1.39	1.0	J	1	03/09/11 12:31	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/09/11 12:31	TO-15/R3QA230
<b>m,p-Xylene</b>	0.8	3.68	2.0	J	1	03/09/11 12:31	TO-15/R3QA230



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> CS-206-01-20110301-01	<b>Lab ID:</b> 1103006-21
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>o-Xylene</b>	0.3	1.18	1.0	J	1	03/09/11 12:31	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	10.3		<b>103 %</b>	<i>80-120</i>	03/07/11	03/09/11 12:31	<i>TO-15/R3QA230</i>



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Site Name: TCE Havertown Project #: DAS R33647
Station ID: LL-206-01-20110301-01 Lab ID: 1103006-22
Sample Matrix: Air Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include Acetone, Benzene, Benzyl chloride, Bromodichloromethane, Bromoform, Bromomethane, 1,3-Butadiene, 2-Butanone, Carbon disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Cyclohexane, Dibromochloromethane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dichlorotetrafluoroethane.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: LL-206-01-20110301-01

Lab ID: 1103006-22

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows include various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, Ethylbenzene, 4-Ethyltoluene, Freon 113, Heptane, Hexachlorobutadiene, Hexane, 2-Hexanone, Isopropyl alcohol, Methyl tert-Butyl Ether, 4-Methyl-2-pentanone, Methylene Chloride, Propylene, Styrene, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Tetrahydrofuran, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl acetate, Vinyl chloride, and m,p-Xylene.



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> LL-206-01-20110301-01	<b>Lab ID:</b> 1103006-22
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
 Targets (Continued)**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>o-Xylene</b>	0.3	1.40	1.0	J	1	03/08/11 15:33	TO-15/R3QA230

**Surrogates**

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	10.0		<b>100 %</b>	<i>80-120</i>	03/07/11	03/08/11 15:33	<i>TO-15/R3QA230</i>



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<b>Site Name:</b> TCE Havertown	<b>Project #:</b> DAS R33647
<b>Station ID:</b> FF-206-01-20110301-01	<b>Lab ID:</b> 1103006-23
<b>Sample Matrix:</b> Air	<b>Date Collected:</b> 03/02/2011

**Volatile Organic Compounds  
Targets**

Analyte	Result ppbv	Result µg/m3	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
<b>Acetone</b>	15.0	35.87	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Benzene</b>	0.6	1.77	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
Benzyl chloride	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Bromodichloromethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Bromoform	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Bromomethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,3-Butadiene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>2-Butanone</b>	0.8	2.47	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
Carbon disulfide	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Carbon Tetrachloride	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Chlorobenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Chloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Chloroform</b>	0.5	2.46	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
<b>Chloromethane</b>	1.0	2.08	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Cyclohexane</b>	0.6	2.15	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
Dibromochloromethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Dichlorodifluoromethane</b>	0.6	3.24	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
1,1-Dichloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,2-Dichloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,1-Dichloroethene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,2-Dichloropropane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230



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**Site Name:** TCE Havertown

**Project #:** DAS R33647

**Station ID:** FF-206-01-20110301-01

**Lab ID:** 1103006-23

**Sample Matrix:** Air

**Date Collected:** 03/02/2011

**Volatile Organic Compounds  
Targets (Continued)**

Analyte	Result ppbv	Result µg/m <sup>3</sup>	Quantitation Limit	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
1,4-Dioxane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Ethanol</b>	240	456.14	25.0	K	25	03/10/11 13:53	TO-15/R3QA230
<b>Ethyl Acetate</b>	3.4	12.36	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Ethylbenzene</b>	0.4	1.84	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
<b>4-Ethyltoluene</b>	0.2	1.19	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
Freon 113	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Heptane</b>	0.9	3.55	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
Hexachlorobutadiene	U	U	1.0	UL	1	03/10/11 12:37	TO-15/R3QA230
<b>Hexane</b>	1.2	4.30	1.0		1	03/10/11 12:37	TO-15/R3QA230
2-Hexanone	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Isopropyl alcohol	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Methyl tert-Butyl Ether</b>	0.2	0.80	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Methylene Chloride	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Propylene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Styrene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Tetrachloroethene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Tetrahydrofuran</b>	0.3	0.83	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
<b>Toluene</b>	2.5	9.54	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Trichloroethene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>Trichlorofluoromethane</b>	0.4	2.21	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
<b>1,2,4-Trimethylbenzene</b>	0.5	2.68	1.0	J	1	03/10/11 12:37	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Vinyl acetate	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
Vinyl chloride	U	U	1.0		1	03/10/11 12:37	TO-15/R3QA230
<b>m,p-Xylene</b>	1.4	6.35	2.0	J	1	03/10/11 12:37	TO-15/R3QA230



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Table with site information: Site Name: TCE Havertown, Station ID: FF-206-01-20110301-01, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-23, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: 0.4, 1.93, 1.0, J, 1, 03/10/11 12:37, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: 10.5, 105 %, 80-120, 03/07/11, 03/10/11 12:37, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: TB-001-01-20110301-04

Lab ID: 1103006-24

Sample Matrix: Air

Date Collected: 03/01/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows list various compounds like Acetone, Benzene, Chlorobenzene, etc., with their respective results and limits.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: TB-001-01-20110301-04

Lab ID: 1103006-24

Sample Matrix: Air

Date Collected: 03/01/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows list various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc., all with a result of 0.00 and a limit of 1.0 or 2.0.



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Table with site information: Site Name: TCE Havertown, Station ID: TB-001-01-20110301-04, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-24, Date Collected: 03/01/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: --, 0.00, 1.0, NA, 1, 03/07/11 19:44, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: --, NA, %, 80-120, 03/07/11, 03/07/11 19:44, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FB-001-01-20110301-03

Lab ID: 1103006-25

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows list various compounds like Acetone, Benzene, Chlorobenzene, etc., with their respective results and limits.



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Site Name: TCE Havertown

Project #: DAS R33647

Station ID: FB-001-01-20110301-03

Lab ID: 1103006-25

Sample Matrix: Air

Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Rows list various compounds like 1,4-Dioxane, Ethanol, Ethyl Acetate, etc., with their respective results and limits.



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Table with site information: Site Name: TCE Havertown, Station ID: FB-001-01-20110301-03, Sample Matrix: Air, Project #: DAS R33647, Lab ID: 1103006-25, Date Collected: 03/02/2011

Volatile Organic Compounds
Targets (Continued)

Table with 8 columns: Analyte, Result ppbv, Result µg/m3, Quantitation Limit, Flags Qualifiers, Dilution, Analyzed, Method/SOP#. Row for o-Xylene with values: --, 0.00, 1.0, NA, 1, 03/07/11 20:44, TO-15/R3QA230

Surrogates

Table with 8 columns: Analyte, Result ppbv, Flags Qualifiers, %Recovery, %Recovery Limits, Prepared, Analyzed, Method/SOP#. Row for Surrogate: Bromofluorobenzene with values: --, NA, %, 80-120, 03/07/11, 03/07/11 20:44, TO-15/R3QA230



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Site Name: TCE Havertown

Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-01, Station ID: SS-014-01-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and a row for 'None Detected' with result 0.0.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-02, Station ID: FF-014-01-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and a row for 'None Detected' with result 0.0.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-03, Station ID: BS-014-01-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and rows for Butane (CAS 106-97-8) and Butane, 2-methyl- (CAS 78-78-4).



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Site Name: TCE Havertown

Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected info.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Lists compounds like Butane, 2-methyl-, Pentane, and 1,3-Butadiene, 2-methyl-.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Lists compounds like Butane, 2-methyl-, and Butane, 2,2,3,3-tetramethyl -.



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Site Name: TCE Havertown

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Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane, Pentane, Heptane, and Octane with their respective results and retention times.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane, Pentane, Heptane, and Octane with their respective results and retention times.



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Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane, 1,3-Butadiene, and Limonene.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane and 2-methyl-Butane.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane and 2-methyl-Butane.



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Site Name: TCE Havertown

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Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected data.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected data.



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Site Name: TCE Havertown

Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists various compounds like Pentane, Butanal, Heptane, Octane, Nonane, and Cyclohexanone.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane and Pentane.



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Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-16, Station ID: FF-053-01-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and data rows for Butane, 2-methyl-butane, and Pentane.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-17, Station ID: LL-018-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and data rows for Butane, 2-methyl-butane, Pentane, and Limonene.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID: 1103006-18, Station ID: CS-018-01-20110301-01, Sample Matrix: Air, Collected: 03/02/2011, and data rows for Butane and 2-methyl-butane.



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Site Name: TCE Havertown

Project #: DAS R33647

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected data.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected data.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected data.



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Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane, Pentane, and Limonene with their respective results and retention times.

Volatile Organic Compounds

Table with 7 columns: CAS Number, Compound, Result (ppbv), Analyte Qualifiers, Retention Time, Analyzed, Method/SOP#. Includes Lab ID, Station ID, Sample Matrix, and Collected date. Lists compounds like Butane, Cyclopropane, and Hexene with their respective results and retention times.



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK1)

Prepared: 03/07/11 07:59 Analyzed: 03/07/11 08:19

Table listing various chemical compounds (e.g., Acetone, Benzene, Chlorobenzene) with their corresponding results (U) and quantitation limits (1.0 ppbv).



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Site Name: TCE Havertown

Project #: DAS R33647

QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK1)

Prepared: 03/07/11 07:59 Analyzed: 03/07/11 08:19

Hexane	U	1.0	ppbv						
2-Hexanone	U	1.0	"						
Isopropyl alcohol	U	1.0	"						
Methyl tert-Butyl Ether	U	1.0	"						
4-Methyl-2-pentanone	U	1.0	"						
Methylene Chloride	U	1.0	"						
Propylene	U	1.0	"						
Styrene	U	1.0	"						
1,1,2,2-Tetrachloroethane	U	1.0	"						
Tetrachloroethene	U	1.0	"						
Tetrahydrofuran	U	1.0	"						
Toluene	U	1.0	"						
1,2,4-Trichlorobenzene	U	1.0	"						
1,1,1-Trichloroethane	U	1.0	"						
1,1,2-Trichloroethane	U	1.0	"						
Trichloroethene	U	1.0	"						
Trichlorofluoromethane	U	1.0	"						
1,2,4-Trimethylbenzene	U	1.0	"						
1,3,5-Trimethylbenzene	U	1.0	"						
Vinyl acetate	U	1.0	"						
Vinyl chloride	U	1.0	"						
m,p-Xylene	U	2.0	"						
o-Xylene	U	1.0	"						

Surrogate: Bromofluorobenzene

9.61

10.000

96

80-120

Blank (BC11103-BLK2)

Prepared: 03/08/11 07:59 Analyzed: 03/08/11 08:04

Acetone	U	1.0	ppbv						
Benzene	U	1.0	"						
Benzyl chloride	U	1.0	"						
Bromodichloromethane	U	1.0	"						
Bromoform	U	1.0	"						
Bromomethane	U	1.0	"						
1,3-Butadiene	U	1.0	"						
2-Butanone	U	1.0	"						
Carbon disulfide	U	1.0	"						
Carbon Tetrachloride	U	1.0	"						
Chlorobenzene	U	1.0	"						
Chloroethane	U	1.0	"						
Chloroform	U	1.0	"						
Chloromethane	U	1.0	"						
Cyclohexane	U	1.0	"						



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK2)

Prepared: 03/08/11 07:59 Analyzed: 03/08/11 08:04

Table listing various chemical compounds (e.g., Dibromochloromethane, 1,2-Dibromoethane) with their corresponding results (U) and quantitation limits (1.0 ppbv).



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Table for Blank (BC11103-BLK2) with columns for Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes. Includes surrogate Bromofluorobenzene.

Table for Blank (BC11103-BLK3) with columns for Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes. Lists numerous organic compounds.



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QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK3)

Prepared: 03/09/11 07:59 Analyzed: 03/09/11 08:50

Ethylbenzene	U	1.0	ppbv							
4-Ethyltoluene	U	1.0	"							
Freon 113	U	1.0	"							
Heptane	U	1.0	"							
Hexachlorobutadiene	U	1.0	"							
Hexane	U	1.0	"							
2-Hexanone	U	1.0	"							
Isopropyl alcohol	U	1.0	"							
Methyl tert-Butyl Ether	U	1.0	"							
4-Methyl-2-pentanone	U	1.0	"							
Methylene Chloride	U	1.0	"							
Propylene	U	1.0	"							
Styrene	U	1.0	"							
1,1,2,2-Tetrachloroethane	U	1.0	"							
Tetrachloroethene	U	1.0	"							
Tetrahydrofuran	U	1.0	"							
Toluene	U	1.0	"							
1,2,4-Trichlorobenzene	U	1.0	"							
1,1,1-Trichloroethane	U	1.0	"							
1,1,2-Trichloroethane	U	1.0	"							
Trichloroethene	U	1.0	"							
Trichlorofluoromethane	U	1.0	"							
1,2,4-Trimethylbenzene	U	1.0	"							
1,3,5-Trimethylbenzene	U	1.0	"							
Vinyl acetate	U	1.0	"							
Vinyl chloride	U	1.0	"							
m,p-Xylene	U	2.0	"							
o-Xylene	U	1.0	"							
Surrogate: Bromofluorobenzene	9.36		"	10.000		94	80-120			



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Project #: DAS R33647

QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK4)

Prepared: 03/10/11 07:59 Analyzed: 03/10/11 11:48

Acetone	U	1.0	ppbv						
Benzene	U	1.0	"						
Benzyl chloride	U	1.0	"						
Bromodichloromethane	U	1.0	"						
Bromoform	U	1.0	"						
Bromomethane	U	1.0	"						
1,3-Butadiene	U	1.0	"						
2-Butanone	U	1.0	"						
Carbon disulfide	U	1.0	"						
Carbon Tetrachloride	U	1.0	"						
Chlorobenzene	U	1.0	"						
Chloroethane	U	1.0	"						
Chloroform	U	1.0	"						
Chloromethane	U	1.0	"						
Cyclohexane	U	1.0	"						
Dibromochloromethane	U	1.0	"						
1,2-Dibromoethane (EDB)	U	1.0	"						
1,2-Dichlorobenzene	0.2	1.0	"						J
1,3-Dichlorobenzene	U	1.0	"						
1,4-Dichlorobenzene	U	1.0	"						
Dichlorodifluoromethane	U	1.0	"						
1,1-Dichloroethane	U	1.0	"						
1,2-Dichloroethane	U	1.0	"						
1,1-Dichloroethene	U	1.0	"						
cis-1,2-Dichloroethene	U	1.0	"						
trans-1,2-Dichloroethene	U	1.0	"						
1,2-Dichloropropane	U	1.0	"						
cis-1,3-Dichloropropene	U	1.0	"						
trans-1,3-Dichloropropene	U	1.0	"						
Dichlorotetrafluoroethane	U	1.0	"						
1,4-Dioxane	U	1.0	"						
Ethanol	U	1.0	"						
Ethyl Acetate	U	1.0	"						
Ethylbenzene	U	1.0	"						
4-Ethyltoluene	U	1.0	"						
Freon 113	U	1.0	"						
Heptane	U	1.0	"						
Hexachlorobutadiene	U	1.0	"						UL
Hexane	U	1.0	"						
2-Hexanone	U	1.0	"						
Isopropyl alcohol	U	1.0	"						



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Project #: DAS R33647

QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Blank (BC11103-BLK4)

Prepared: 03/10/11 07:59 Analyzed: 03/10/11 11:48

Methyl tert-Butyl Ether	U	1.0	ppbv							
4-Methyl-2-pentanone	U	1.0	"							
Methylene Chloride	U	1.0	"							
Propylene	U	1.0	"							
Styrene	U	1.0	"							
1,1,2,2-Tetrachloroethane	U	1.0	"							
Tetrachloroethene	U	1.0	"							
Tetrahydrofuran	U	1.0	"							
Toluene	U	1.0	"							
1,2,4-Trichlorobenzene	U	1.0	"							
1,1,1-Trichloroethane	U	1.0	"							
1,1,2-Trichloroethane	U	1.0	"							
Trichloroethene	U	1.0	"							
Trichlorofluoromethane	U	1.0	"							
1,2,4-Trimethylbenzene	U	1.0	"							
1,3,5-Trimethylbenzene	U	1.0	"							
Vinyl acetate	U	1.0	"							
Vinyl chloride	U	1.0	"							
m,p-Xylene	U	2.0	"							
o-Xylene	U	1.0	"							
Surrogate: Bromofluorobenzene	10.2		"	10.000		102	80-120			

LCS (BC11103-BS1)

Prepared: 03/08/11 07:59 Analyzed: 03/08/11 19:02

Acetone	8.72000	1.0	ppbv	10.000		87	70-130			
Benzene	9.28000	1.0	"	10.000		93	70-130			
Benzyl chloride	8.76000	1.0	"	10.000		88	70-130			
Bromodichloromethane	9.37000	1.0	"	10.000		94	70-130			
Bromoform	9.22000	1.0	"	10.000		92	70-130			
Bromomethane	9.52000	1.0	"	10.000		95	70-130			
1,3-Butadiene	9.58000	1.0	"	10.000		96	70-130			
2-Butanone	8.76000	1.0	"	10.000		88	70-130			
Carbon disulfide	9.19000	1.0	"	10.000		92	70-130			
Carbon Tetrachloride	9.56000	1.0	"	10.000		96	70-130			
Chlorobenzene	8.89000	1.0	"	10.000		89	70-130			
Chloroethane	9.12000	1.0	"	10.000		91	70-130			
Chloroform	8.91000	1.0	"	10.000		89	70-130			
Chloromethane	9.38000	1.0	"	10.000		94	70-130			
Cyclohexane	9.64000	1.0	"	10.000		96	70-130			
Dibromochloromethane	9.08000	1.0	"	10.000		91	70-130			
1,2-Dibromoethane (EDB)	9.16000	1.0	"	10.000		92	70-130			
1,2-Dichlorobenzene	9.12000	1.0	"	10.000		91	70-130			



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

LCS (BC11103-BS1)

Prepared: 03/08/11 07:59 Analyzed: 03/08/11 19:02

Main data table listing analytes (e.g., 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, etc.) with columns for Result, Limit, Units, Spike Level, Source Result, %REC, and RPD.



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QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

LCS (BC11103-BS1)				Prepared: 03/08/11 07:59	Analyzed: 03/08/11 19:02
m,p-Xylene	18.1500	2.0	ppbv	20.000	91 70-130
o-Xylene	8.96000	1.0	"	10.000	90 70-130
Surrogate: Bromofluorobenzene	10.3		"	10.000	103 80-120

LCS (BC11103-BS2)				Prepared: 03/08/11 07:59	Analyzed: 03/10/11 19:51
Acetone	10.3500	1.0	ppbv	10.000	104 70-130
Benzene	10.5200	1.0	"	10.000	105 70-130
Benzyl chloride	10.8400	1.0	"	10.000	108 70-130
Bromodichloromethane	11.9400	1.0	"	10.000	119 70-130
Bromoform	10.6700	1.0	"	10.000	107 70-130
Bromomethane	9.92000	1.0	"	10.000	99 70-130
1,3-Butadiene	10.0200	1.0	"	10.000	100 70-130
2-Butanone	9.80000	1.0	"	10.000	98 70-130
Carbon disulfide	9.83000	1.0	"	10.000	98 70-130
Carbon Tetrachloride	12.5200	1.0	"	10.000	125 70-130
Chlorobenzene	9.74000	1.0	"	10.000	97 70-130
Chloroethane	9.55000	1.0	"	10.000	96 70-130
Chloroform	10.1400	1.0	"	10.000	101 70-130
Chloromethane	9.82000	1.0	"	10.000	98 70-130
Cyclohexane	10.8400	1.0	"	10.000	108 70-130
Dibromochloromethane	10.4700	1.0	"	10.000	105 70-130
1,2-Dibromoethane (EDB)	9.87000	1.0	"	10.000	99 70-130
1,2-Dichlorobenzene	10.8800	1.0	"	10.000	109 70-130
1,3-Dichlorobenzene	10.5600	1.0	"	10.000	106 70-130
1,4-Dichlorobenzene	10.6500	1.0	"	10.000	106 70-130
Dichlorodifluoromethane	11.7000	1.0	"	10.000	117 70-130
1,1-Dichloroethane	9.72000	1.0	"	10.000	97 70-130
1,2-Dichloroethane	11.5400	1.0	"	10.000	115 70-130
1,1-Dichloroethene	10.4900	1.0	"	10.000	105 70-130
cis-1,2-Dichloroethene	10.2100	1.0	"	10.000	102 70-130
trans-1,2-Dichloroethene	10.0900	1.0	"	10.000	101 70-130
1,2-Dichloropropane	10.2100	1.0	"	10.000	102 70-130
cis-1,3-Dichloropropene	11.0300	1.0	"	10.000	110 70-130
trans-1,3-Dichloropropene	11.5600	1.0	"	10.000	116 70-130
Dichlorotetrafluoroethane	10.6400	1.0	"	10.000	106 70-130
1,4-Dioxane	11.0900	1.0	"	10.000	111 70-130
Ethanol	9.09000	1.0	"	10.000	91 70-130
Ethyl Acetate	9.80000	1.0	"	10.000	98 70-130
Ethylbenzene	10.0700	1.0	"	10.000	101 70-130
4-Ethyltoluene	10.5300	1.0	"	10.000	105 70-130
Freon 113	10.1300	1.0	"	10.000	101 70-130



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Site Name: TCE Havertown

Project #: DAS R33647

QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

LCS (BC11103-BS2)

Prepared: 03/08/11 07:59 Analyzed: 03/10/11 19:51

Table listing various analytes (Heptane, Hexachlorobutadiene, Hexane, etc.) with their respective results, limits, and units.

Surrogate: Bromofluorobenzene

11.3

"

10.000

113

80-120

Matrix Spike (BC11103-MS1)

Source: 1103006-05RE1

Prepared: 03/08/11 07:59

Analyzed: 03/08/11 17:37

Table listing matrix spike analytes (Acetone, Benzene, Benzyl chloride, etc.) with their results, limits, and units.



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Main data table with columns: Matrix Spike (BC11103-MS1), Source: 1103006-05RE1, Prepared: 03/08/11 07:59, Analyzed: 03/08/11 17:37, and various analyte results.



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QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Matrix Spike (BC11103-MS1) Source: 1103006-05RE1 Prepared: 03/08/11 07:59 Analyzed: 03/08/11 17:37. Table listing analytes like Trichlorofluoromethane, 1,2,4-Trimethylbenzene, etc.

Matrix Spike (BC11103-MS2) Source: 1103006-22RE1 Prepared: 03/08/11 07:59 Analyzed: 03/10/11 20:32. Table listing analytes like Acetone, Benzene, Benzyl chloride, etc.



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QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Matrix Spike (BC11103-MS2)	Source: 1103006-22RE1			Prepared: 03/08/11 07:59	Analyzed: 03/10/11 20:32		
Ethanol	31.5200	1.0	ppbv	10.000	18.6500	129	70-130
Ethyl Acetate	9.78000	1.0	"	10.000	U	98	70-130
Ethylbenzene	10.1600	1.0	"	10.000	U	102	70-130
4-Ethyltoluene	9.99000	1.0	"	10.000	U	100	70-130
Freon 113	10.3500	1.0	"	10.000	U	104	70-130
Heptane	10.8600	1.0	"	10.000	U	109	70-130
Hexachlorobutadiene	10.9400	1.0	"	10.000	U	109	70-130
Hexane	10.0500	1.0	"	10.000	U	100	70-130
2-Hexanone	10.2000	1.0	"	10.000	U	102	70-130
Isopropyl alcohol	11.4600	1.0	"	10.000	U	115	70-130
Methyl tert-Butyl Ether	10.2700	1.0	"	10.000	U	103	70-130
4-Methyl-2-pentanone	10.8600	1.0	"	10.000	U	109	70-130
Methylene Chloride	9.94000	1.0	"	10.000	U	99	70-130
Propylene	11.8200	1.0	"	10.000	U	118	70-130
Styrene	10.2700	1.0	"	10.000	U	103	70-130
1,1,2,2-Tetrachloroethane	9.73000	1.0	"	10.000	U	97	70-130
Tetrachloroethene	10.2800	1.0	"	10.000	U	103	70-130
Tetrahydrofuran	9.50000	1.0	"	10.000	U	95	70-130
Toluene	10.1700	1.0	"	10.000	U	102	70-130
1,2,4-Trichlorobenzene	10.3900	1.0	"	10.000	U	104	70-130
1,1,1-Trichloroethane	10.7700	1.0	"	10.000	U	108	70-130
1,1,2-Trichloroethane	9.87000	1.0	"	10.000	U	99	70-130
Trichloroethene	10.9000	1.0	"	10.000	U	109	70-130
Trichlorofluoromethane	11.1900	1.0	"	10.000	U	112	70-130
1,2,4-Trimethylbenzene	9.96000	1.0	"	10.000	U	100	70-130
1,3,5-Trimethylbenzene	9.91000	1.0	"	10.000	U	99	70-130
Vinyl acetate	10.1200	1.0	"	10.000	U	101	70-130
Vinyl chloride	10.6900	1.0	"	10.000	U	107	70-130
m,p-Xylene	20.4200	2.0	"	20.000	U	102	70-130
o-Xylene	10.0500	1.0	"	10.000	U	100	70-130
Surrogate: Bromofluorobenzene	11.2		"	10.000		112	80-120



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Site Name: TCE Havertown

Project #: DAS R33647

QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Main data table with columns: Matrix Spike Dup (BC11103-MSD1), Source: 1103006-05RE1, Prepared: 03/08/11 07:59, Analyzed: 03/08/11 18:19, and 10 columns of analytical data.



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Site Name: TCE Havertown

Project #: DAS R33647

QC Data
Volatile Organic Compounds

Table with 11 columns: Analyte, Result, Quantitation Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch BC11103 - TO-15 prep ESAT

Matrix Spike Dup (BC11103-MSD1) Source: 1103006-05RE1 Prepared: 03/08/11 07:59 Analyzed: 03/08/11 18:19. Table listing various compounds and their results.

Matrix Spike Dup (BC11103-MSD2) Source: 1103006-22RE1 Prepared: 03/08/11 07:59 Analyzed: 03/10/11 21:12. Table listing various compounds and their results.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center  
 Office of Analytical Services and Quality Assurance  
 701 Mapes Road  
 Fort Meade, Maryland 20755-5350



Site Name: TCE Havertown

Project #: DAS R33647

QC Data  
 Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Matrix Spike Dup (BC11103-MSD2)	Source: 1103006-22RE1	Prepared: 03/08/11 07:59	Analyzed: 03/10/11 21:12							
1,3-Dichlorobenzene	10.3100	1.0	ppbv	10.000	U	103	70-130	0.7	25	
1,4-Dichlorobenzene	10.2900	1.0	"	10.000	U	103	70-130	0.2	25	
Dichlorodifluoromethane	11.6300	1.0	"	10.000	U	116	70-130	5	25	
1,1-Dichloroethane	9.44000	1.0	"	10.000	U	94	70-130	5	25	
1,2-Dichloroethane	10.8800	1.0	"	10.000	U	109	70-130	4	25	
1,1-Dichloroethene	10.3800	1.0	"	10.000	U	104	70-130	4	25	
cis-1,2-Dichloroethene	10.0600	1.0	"	10.000	U	101	70-130	4	25	
trans-1,2-Dichloroethene	9.75000	1.0	"	10.000	U	98	70-130	5	25	
1,2-Dichloropropane	10.0700	1.0	"	10.000	U	101	70-130	4	25	
cis-1,3-Dichloropropene	10.9100	1.0	"	10.000	U	109	70-130	0.5	25	
trans-1,3-Dichloropropene	11.3700	1.0	"	10.000	U	114	70-130	2	25	
Dichlorotetrafluoroethane	10.8500	1.0	"	10.000	U	108	70-130	5	25	
1,4-Dioxane	10.5700	1.0	"	10.000	U	106	70-130	2	25	
Ethanol	32.5200	1.0	"	10.000	18.6500	139	70-130	7	25	A
Ethyl Acetate	9.80000	1.0	"	10.000	U	98	70-130	0.2	25	
Ethylbenzene	9.90000	1.0	"	10.000	U	99	70-130	3	25	
4-Ethyltoluene	10.1500	1.0	"	10.000	U	102	70-130	2	25	
Freon 113	9.95000	1.0	"	10.000	U	100	70-130	4	25	
Heptane	10.6400	1.0	"	10.000	U	106	70-130	2	25	
Hexachlorobutadiene	10.9900	1.0	"	10.000	U	110	70-130	0.5	25	
Hexane	9.58000	1.0	"	10.000	U	96	70-130	5	25	
2-Hexanone	9.81000	1.0	"	10.000	U	98	70-130	4	25	
Isopropyl alcohol	11.0100	1.0	"	10.000	U	110	70-130	4	25	
Methyl tert-Butyl Ether	10.3300	1.0	"	10.000	U	103	70-130	0.6	25	
4-Methyl-2-pentanone	10.7100	1.0	"	10.000	U	107	70-130	1	25	
Methylene Chloride	9.55000	1.0	"	10.000	U	96	70-130	4	25	
Propylene	11.3600	1.0	"	10.000	U	114	70-130	4	25	
Styrene	10.1300	1.0	"	10.000	U	101	70-130	1	25	
1,1,2,2-Tetrachloroethane	9.66000	1.0	"	10.000	U	97	70-130	0.7	25	
Tetrachloroethene	10.1000	1.0	"	10.000	U	101	70-130	2	25	
Tetrahydrofuran	9.43000	1.0	"	10.000	U	94	70-130	0.7	25	
Toluene	9.92000	1.0	"	10.000	U	99	70-130	2	25	
1,2,4-Trichlorobenzene	10.4400	1.0	"	10.000	U	104	70-130	0.5	25	
1,1,1-Trichloroethane	10.2300	1.0	"	10.000	U	102	70-130	5	25	
1,1,2-Trichloroethane	9.65000	1.0	"	10.000	U	96	70-130	2	25	
Trichloroethene	10.9100	1.0	"	10.000	U	109	70-130	0.09	25	
Trichlorofluoromethane	10.5700	1.0	"	10.000	U	106	70-130	6	25	
1,2,4-Trimethylbenzene	10.2700	1.0	"	10.000	U	103	70-130	3	25	
1,3,5-Trimethylbenzene	10.0700	1.0	"	10.000	U	101	70-130	2	25	
Vinyl acetate	9.76000	1.0	"	10.000	U	98	70-130	4	25	
Vinyl chloride	10.1700	1.0	"	10.000	U	102	70-130	5	25	



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QC Data  
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BC11103 - TO-15 prep ESAT

Matrix Spike Dup (BC11103-MSD2)	Source: 1103006-22RE1		Prepared: 03/08/11 07:59	Analyzed: 03/10/11 21:12
m,p-Xylene	19.8900	2.0	ppbv	20.000 U 99 70-130 3 25
o-Xylene	9.81000	1.0	"	10.000 U 98 70-130 2 25
Surrogate: Bromofluorobenzene	11.0		"	10.000 110 80-120



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**Project #: DAS R33647**

**Notes and Definitions**

- UL The analyte was not detected. The quantitation limit is probably higher due to indications of a low bias.
- T Tentatively Identified Compound. Identified as a result of a library search using the EPA/NIST Mass Spectral Library. Standards were not used to verify the identity and quantity of the compound. The reported value is an estimate.
- NA Not analyzed - analysis not performed.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- A Quality control value is outside acceptance limits.
- NR Not Reported
- RPD Relative Percent Difference
- U Analyte included in the analysis, but not detected at or above the quantitation limit.

Quantitation Limit: The lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method and that takes into account analytical adjustments made during sample preparation and analysis.

SOLID SAMPLE RESULTS - REPORTING PROTOCOL: Solid samples where % Solids (percent dry wt at 105 degrees C) has been performed, are analyzed wet and converted to a dry weight result for reporting purposes. This is routine for organics and most inorganic analyses. When metals and mercury analyses are requested, solid samples are routinely analyzed and reported on a dry weight basis. Solid samples for metals/mercury are prepared for analysis by an initial drying at 60 degree C and homogenization before digestion. Oil-type samples will be analyzed and reported on a wet weight basis for all analyses because of the nature of the sample. Any exceptions to the protocol will be noted with a qualifier