UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Environmental Science Center
Region III Laboratory
701 Mapes Road
Fort Meade, Maryland 20755-5350

Final Analytical Report

Site Name.....	FORMER FEDERAL-MOGUL SITE
Sample Collection Date(s).....	1/16/2020 - 1/16/2020
Contact.....	Dominic Ventura
Report Date.....	02/20/2020 09:22
Project #.....	DAS R35733
Work Order.....	2001012

Analyses included in this report:

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

Approved for Release

Region III Laboratory Representative

Site Name:	FORMER FEDERAL-MOGUL SITE	Project #:	DAS R35733

Report Narrative

VOC Air Analysis Note:

This report provides reporting units in ug/m3 and ppbv. Slight rounding errors will occur in the Electronic Data Deliverable (EDD).

The initial calibration curve had a % RSD greater than 30% for benzyl chloride. Since no positive result is reported for benzyl chloride in samples 2001012-01 through 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2, the quantitation limit is qualified as estimated (UJ) for benzyl chloride.

The second source calibration verification standard (SCV) had percent differences (% Ds) greater than 30% for naphthalene and 1,2,4-trichlorobenzene due to low responses. Since no positive results are reported for naphthalene and 1,2,4-trichlorobenzene in samples 2001012-01 through 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2, the quantitation limits for naphthalene and 1,2,4-trichlorobenzene are qualified as biased low (UL).

The continuing calibration verification standard analyzed on 1/22/20 had percent differences (% Ds) greater than 30% for 2-hexanone and benzyl chloride due to high responses. Therefore, the 2-hexanone result in sample 2001012-03 is qualified as biased high (K). Since there were no positive results for 2-hexanone in samples 2001012-01, 2001012-02, 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2, no data are impacted by this outlier. Since no positive result is reported for benzyl chloride, the quantitation limit for samples 2001012-01 through 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2 is qualified as estimated (UJ) for benzyl chloride based on the initial calibration outlier.

The Blank Spike BB00304-BS1 had high recoveries outside the QC limits (> 130%) for benzyl chloride, ethanol, ethyl acetate, 2-hexanone and isopropyl alcohol. Since no positive result is reported for benzyl chloride, the quantitation limit for samples 2001012-01 through 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2 is qualified as estimated (UJ) for benzyl chloride based on the initial calibration outlier. The ethanol result is qualified as biased high (K) in samples 2001012-01 through 2001012-04. Since no positive result is reported for ethanol in blanks BB00304-BLK1 and BB00304-BLK2, no data are impacted by this outlier. Since no positive result is reported for ethyl acetate in samples 2001012-01 through 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2, no data are impacted by this outlier. The 2-hexanone result is qualified as biased high (K) in sample 2001012-03. Since there were no positive result for 2-hexanone in samples 2001012-01, 2001012-02, 2001012-04 and blanks BB00304-BLK1 and BB00304-BLK2, no data are impacted by this outlier. The isopropyl alcohol result is qualified as biased high (K) in samples 2001012-01, 2001012-02, 2001012-04. Since no positive result is reported for isopropyl alcohol in sample 2001012-03 and blanks BB00304-BLK1 and BB00304-BLK2, no data are impacted by this outlier.

The percent recoveries (%Recs) for benzyl chloride, 2-hexanone, isopropyl alcohol and propene are outside the control limit (> 130%) in the matrix spike (MS) and matrix spike duplicate (MSD) analysis of sample 2001012-02. The percent recoveries (%Recs) for ethanol and ethyl acetate are outside the control limits (> 130%) in the MSD analysis of sample 2001012-02. Since no positive result is reported for benzyl chloride in sample 2001012-02, the quantitation limit is qualified as estimated (UJ) for benzyl chloride based on the initial calibration outlier. The ethanol and isopropyl alcohol results are qualified as biased high (K) in sample 2001012-02. Since no positive results are reported for 2-hexanone, ethyl acetate and propene in sample 2001012-02, no data are impacted by these outliers.

Cyclohexane was detected in sample 2001012-01. The cyclohexane peak eluted closely with 1-butanol and made identification of the cyclohexane more difficult. The cyclohexane result in 2001012-01 is qualified as biased high (K) due to co-elution.
The 1-butanol was not reported as a TIC due to co-elution with cyclohexane.

Trichlorofluoromethane was detected in sample 2001012-02. The trichlorofluoromethane peak eluted closely with 1,2-dichloro-1,1,2-trifluoroethane and made identification of the trichlorofluoromethane more difficult. The J qualifier supersedes the K qualifier (biased high) for trichlorofluoromethane in sample 2001012-02. The 1,2-dichloro-1,1,2-trifluoroethane was not reported as a TIC due to co-elution with trichlorofluoromethane.

Cyclohexane was detected in sample 2001012-03. The cyclohexane peak eluted closely with 2,3-dimethyl pentane and made identification of the cyclohexane more difficult. The cyclohexane result in 2001012-03 is qualified as biased high (K) due to co-elution. The 2,3-dimethyl pentane was not reported as a TIC due to co-elution with cyclohexane.

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled Begin	Date Sampled End	Date Received
FFM-011620-SG-02	2001012-01	Air	1/15/20 11:03	01/16/2020 08:40	01/17/2020 10:30
FFM-011620-SG-02-D	2001012-02	Air	1/15/20 11:03	01/16/2020 08:40	01/17/2020 10:30
FFM-011620-SG-01	2001012-03	Air	1/15/20 14:40	01/16/2020 12:47	01/17/2020 10:30
FFM-011620-SG-03	2001012-04	Air	1/15/20 13:40	01/16/2020 11:37	01/17/2020 10:30

USEPA
DateShipped: 1/16/2020
CarrierName: FedEx
AirbillNo: 777500666611

CHAIN OF CUSTODY RECORD
Site #: 0296
DAS #: R35733

No: 3-011620-152133-0002
Lab: USEPA Region III Lab Fort Meade
Lab Contact: Kevin Poff
Lab Phone: 410-305-2938

Lab #	Sample #	CLP Sample #	Sampler	Tag	Analyses	Matrix	Numb Cont	Container	Sample Date	Preservative	Sample Time	Pump #	OrificeID	Start Pressure	Stop Pressure	Start_Date	Start_Time	Stop_Date	Stop_Time
2001012-01	FFM-011620-SG-02	C0AB7	START	1017	CLP VOC (TO-15)	Soil Gas	1	6 liter Summa Canister	1/16/2020	None	08:40	22204	04946	-30	-6	1/15/2020	11:03:00 AM	1/16/2020	8:40:00 AM
-02	FFM-011620-SG-02-D	C0AB8	START	1018	CLP VOC (TO-15)	Soil Gas	1	6 liter Summa Canister	1/16/2020	None	08:40	11552	02579	-30	-8	1/15/2020	11:03:00 AM	1/16/2020	8:40:00 AM

2001012-01 MC 1/17/20 -02

Nonresponsive based on revised scope

Special Instructions: PID screeing obtained 90 ppb

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Samples for Analysis	Nonresponsive based on revised scope Weston Solutions	1/16/20 1800	Matt Cooke / ESAT	1/17/20 10:30	No Temp Blank MC 1/17/20

USEPA
DateShipped: 1/16/2020
CarrierName: FedEx
AirbillNo: 777501811422

CHAIN OF CUSTODY RECORD
Site #: 0296
DAS #: R35733

No: 3-011620-161657-0003
Lab: USEPA Region III Lab Fort Meade
Lab Contact: Kevin Poff
Lab Phone: 410-305-2938

Lab #	Sample #	CLP Sample #	Sampler	Tag	Analyses	Matrix	Numb Cont	Container	Sample Date	Preservative	Sample Time	Pump #	OrificeID	Start Pressure	Stop Pressure	Start_Date	Start_Time	Stop_Date	Stop_Time
2001012-03	FFM-011620-SG-01	C0AB6	START	1016	CLP VOC (TO-15)	Soil Gas	1	6 liter Summa Canister	1/16/2020	None	12:47	4070	04975	-30	-10	1/15/2020	2:40:00 PM	1/16/2020	12:47:00 PM
-04	FFM-011620-SG-03	C0AB9	START	1019	CLP VOC (TO-15)	Soil Gas	1	6 liter Summa Canister	1/16/2020	None	11:37	11694	04958	-30	-9	1/15/2020	1:40:00 PM	1/16/2020	11:37:00 AM

Nonresponsive based on revised scope

Special Instructions: CLP# C0AB6 PID screeing - 3200 ppb VOC
CLP# C0AB9 PID screeing - 100 ppb VOC

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Samples for Analysis	Nonresponsive based on revised scope Weston Solutions	1/16/20 1800	Matt Cooke / ESAT	1/17/20 10:30	NO Temp Blank MC 1/17/20

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-02 **Lab ID:** 2001012-01

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	**20.5**	**8.6**	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Benzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Benzyl chloride	U	U	0.5	UJ	1	01/21/2020 22:34	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Bromoform	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Bromomethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
2-Butanone	**0.9**	**0.3**	0.5	J	1	01/21/2020 22:34	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Chloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Chloroform	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Chloromethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Cyclohexane	**6.6**	**1.9**	0.5	K	1	01/21/2020 22:34	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Dichlorodifluoromethane	**2.5**	**0.5**	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Ethanol	**250**	**132**	5.0	K	10	01/22/2020 16:19	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Freon 113	**24.3**	**3.1**	0.5		1	01/21/2020 22:34	TO-15/R3QA230

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-02 **Lab ID:** 2001012-01

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	**3.5**	**0.9**	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Hexane	**1.1**	**0.3**	0.5	J	1	01/21/2020 22:34	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Isopropyl alcohol	**5.5**	**2.2**	0.5	K	1	01/21/2020 22:34	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Naphthalene	U	U	0.5	UL	1	01/21/2020 22:34	TO-15/R3QA230
Propylene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Styrene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Tetrachloroethene	**3.9**	**0.6**	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Toluene	**4.0**	**1.1**	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5	UL	1	01/21/2020 22:34	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Trichlorofluoromethane	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	01/21/2020 22:34	TO-15/R3QA230
o-Xylene	U	U	0.5		1	01/21/2020 22:34	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	9.09		**91 %**	*80-120*	01/21/20	01/21/2020 22:34	*TO-15/R3QA230*

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-02-D **Lab ID:** 2001012-02

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	**18.5**	**7.7**	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Benzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Benzyl chloride	U	U	0.5	UJ	1	01/22/2020 00:20	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Bromoform	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Bromomethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
2-Butanone	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Chloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Chloroform	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Chloromethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Cyclohexane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Dichlorodifluoromethane	**2.5**	**0.5**	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Ethanol	**235**	**124**	5.0	K	10	01/22/2020 17:58	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Freon 113	**22.4**	**2.9**	0.5		1	01/22/2020 00:20	TO-15/R3QA230

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701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-02-D **Lab ID:** 2001012-02

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Hexane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Isopropyl alcohol	**4.6**	**1.9**	0.5	K	1	01/22/2020 00:20	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Naphthalene	U	U	0.5	UL	1	01/22/2020 00:20	TO-15/R3QA230
Propylene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Styrene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Toluene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5	UL	1	01/22/2020 00:20	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Trichlorofluoromethane	**1.4**	**0.2**	0.5	J	1	01/22/2020 00:20	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	01/22/2020 00:20	TO-15/R3QA230
o-Xylene	U	U	0.5		1	01/22/2020 00:20	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	9.08		**91 %**	*80-120*	01/21/20	01/22/2020 00:20	*TO-15/R3QA230*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Environmental Science Center
Region III Laboratory
701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-01 **Lab ID:** 2001012-03

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	**2100**	**878**	37.8		75.5	01/23/2020 08:50	TO-15/R3QA230
Benzene	**1.3**	**0.4**	0.5	J	1	01/22/2020 02:05	TO-15/R3QA230
Benzyl chloride	U	U	0.5	UJ	1	01/22/2020 02:05	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Bromoform	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Bromomethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
2-Butanone	**301**	**101**	10.0		20	01/22/2020 23:08	TO-15/R3QA230
Carbon disulfide	**1.0**	**0.3**	0.5	J	1	01/22/2020 02:05	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Chloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Chloroform	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Chloromethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Cyclohexane	**29.4**	**8.5**	0.5	K	1	01/22/2020 02:05	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Dichlorodifluoromethane	**2.3**	**0.5**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Ethanol	**161**	**84.5**	10.0	K	20	01/22/2020 23:08	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Ethylbenzene	**9.2**	**2.1**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-01 **Lab ID:** 2001012-03

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Freon 113	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Heptane	**32.4**	**7.8**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Hexane	**23.1**	**6.5**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
2-Hexanone	**78.6**	**19.0**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Isopropyl alcohol	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
4-Methyl-2-pentanone	**21.4**	**5.2**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Naphthalene	U	U	0.5	UL	1	01/22/2020 02:05	TO-15/R3QA230
Propylene	**7.4**	**4.3**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Styrene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Toluene	**11.9**	**3.1**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5	UL	1	01/22/2020 02:05	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Trichlorofluoromethane	**1.2**	**0.2**	0.5	J	1	01/22/2020 02:05	TO-15/R3QA230
1,2,4-Trimethylbenzene	**58.6**	**11.8**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
1,3,5-Trimethylbenzene	**21.4**	**4.3**	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	01/22/2020 02:05	TO-15/R3QA230
m,p-Xylene	**25.0**	**5.7**	1.0		1	01/22/2020 02:05	TO-15/R3QA230
o-Xylene	**14.4**	**3.3**	0.5		1	01/22/2020 02:05	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-01 **Lab ID:** 2001012-03

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds

Surrogates

Analyte	Result ppbv	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	8.88		**89 %**	*80-120*	01/21/20	01/22/2020 02:05	*TO-15/R3QA230*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Environmental Science Center
Region III Laboratory
701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-03 **Lab ID:** 2001012-04

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	**4.3**	**1.8**	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Benzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Benzyl chloride	U	U	0.5	UJ	1	01/22/2020 03:51	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Bromoform	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Bromomethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
2-Butanone	**0.6**	**0.2**	0.5	J	1	01/22/2020 03:51	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Chloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Chloroform	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Chloromethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Cyclohexane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,2-Dichlorobenzene	**1.5**	**0.2**	0.5	J	1	01/22/2020 03:51	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Dichlorodifluoromethane	**2.3**	**0.5**	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Ethanol	**86.2**	**45.3**	2.5	K	5	01/22/2020 15:30	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Freon 113	**1.9**	**0.2**	0.5	J	1	01/22/2020 03:51	TO-15/R3QA230

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Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #:** DAS R35733

Station ID: FFM-011620-SG-03 **Lab ID:** 2001012-04

Sample Matrix: Air **Date Collected:** 01/16/2020

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Hexane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Isopropyl alcohol	**2.4**	**1.0**	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Naphthalene	U	U	0.5	UL	1	01/22/2020 03:51	TO-15/R3QA230
Propylene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Styrene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Toluene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5	UL	1	01/22/2020 03:51	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Trichlorofluoromethane	**1.4**	**0.2**	0.5	J	1	01/22/2020 03:51	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	01/22/2020 03:51	TO-15/R3QA230
o-Xylene	U	U	0.5		1	01/22/2020 03:51	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	9.40		**94 %**	*80-120*	01/21/20	01/22/2020 03:51	*TO-15/R3QA230*

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

Tentatively Identified Compound (TIC) Report

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	2001012-01					
Station ID:	FFM-011620-SG-02					
Sample Matrix:	Air					
Collected:	01/16/2020					
74-98-6	Propane	1.6	T	4.59	01/21/2020 22:34	TO-15/R3QA230
109-66-0	Pentane	3.1	T	7.92	01/21/2020 22:34	TO-15/R3QA230
1066-40-6	Silanol, trimethyl-	4.3	T	10.24	01/21/2020 22:34	TO-15/R3QA230
71-41-0	1-Pentanol	1.2	T	16.91	01/21/2020 22:34	TO-15/R3QA230
111-65-9	Octane	17.7	T	17.67	01/21/2020 22:34	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	2001012-02					
Station ID:	FFM-011620-SG-02-D					
Sample Matrix:	Air					
Collected:	01/16/2020					
74-98-6	Propane	4.9	T	4.60	01/22/2020 00:20	TO-15/R3QA230
109-66-0	Pentane	2.2	T	7.92	01/22/2020 00:20	TO-15/R3QA230
1066-40-6	Silanol, trimethyl-	1.7	T	10.24	01/22/2020 00:20	TO-15/R3QA230

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Fort Meade, Maryland 20755-5350

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

Tentatively Identified Compound (TIC) Report

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	2001012-03					
Station ID:	FFM-011620-SG-01					
Sample Matrix:	Air					
Collected:	01/16/2020					
15890-40-1	Cyclopentane, 1,2,3-trimethyl-, (1.alpha.,2.alpha	24.6	T	16.39	01/22/2020 02:05	TO-15/R3QA230
3073-66-3	Cyclohexane, 1,1,3-trimethyl-	57.5	T	19.04	01/22/2020 02:05	TO-15/R3QA230
2234-75-5	Cyclohexane, 1,2,4-trimethyl-	27.7	T	19.39	01/22/2020 02:05	TO-15/R3QA230
6236-88-0	Cyclohexane, 1-ethyl-4-methyl-, trans-	30.9	T	20.24	01/22/2020 02:05	TO-15/R3QA230
3728-55-0	1-Ethyl-3-methylcyclohexane (c,t)	22.0	T	20.64	01/22/2020 02:05	TO-15/R3QA230
2051-30-1	Octane, 2,6-dimethyl-	44.7	T	20.75	01/22/2020 02:05	TO-15/R3QA230
NA	unknown (01)	78.3	T	20.97	01/22/2020 02:05	TO-15/R3QA230
NA	unknown (02)	38.8	T	21.72	01/22/2020 02:05	TO-15/R3QA230
124-18-5	Decane	39.8	T	21.91	01/22/2020 02:05	TO-15/R3QA230
NA	unknown (03)	27.5	T	22.28	01/22/2020 02:05	TO-15/R3QA230
NA	unknown (04)	42.8	T	22.82	01/22/2020 02:05	TO-15/R3QA230
91-17-8	Naphthalene, decahydro-	25.0	T	23.57	01/22/2020 02:05	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	2001012-04					
Station ID:	FFM-011620-SG-03					
Sample Matrix:	Air					
Collected:	01/16/2020					
NA	None Detected	0.0			01/22/2020 03:51	TO-15/R3QA230

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Blank (BB00304-BLK1)				Prepared: 01/21/2020 05:12	Analyzed: 01/21/2020 13:51					
Acetone	U	0.5	ppbv							
Benzene	U	0.5	"							
Benzyl chloride	U	0.5	"							UJ
Bromodichloromethane	U	0.5	"							
Bromoform	U	0.5	"							
Bromomethane	U	0.5	"							
1,3-Butadiene	U	0.5	"							
2-Butanone	U	0.5	"							
Carbon disulfide	U	0.5	"							
Carbon Tetrachloride	U	0.5	"							
Chlorobenzene	U	0.5	"							
Chloroethane	U	0.5	"							
Chloroform	U	0.5	"							
Chloromethane	U	0.5	"							
Cyclohexane	U	0.5	"							
Dibromochloromethane	U	0.5	"							
1,2-Dibromoethane (EDB)	U	0.5	"							
1,2-Dichlorobenzene	U	0.5	"							
1,3-Dichlorobenzene	U	0.5	"							
1,4-Dichlorobenzene	U	0.5	"							
Dichlorodifluoromethane	U	0.5	"							
1,1-Dichloroethane	U	0.5	"							
1,2-Dichloroethane	U	0.5	"							
1,1-Dichloroethene	U	0.5	"							
cis-1,2-Dichloroethene	U	0.5	"							
trans-1,2-Dichloroethene	U	0.5	"							
1,2-Dichloropropane	U	0.5	"							
cis-1,3-Dichloropropene	U	0.5	"							
trans-1,3-Dichloropropene	U	0.5	"							
Dichlorotetrafluoroethane	U	0.5	"							
1,4-Dioxane	U	0.5	"							
Ethanol	U	0.5	"							
Ethyl Acetate	U	0.5	"							
Ethylbenzene	U	0.5	"							
4-Ethyltoluene	U	0.5	"							
Freon 113	U	0.5	"							
Heptane	U	0.5	"							
Hexachlorobutadiene	U	0.5	"							
Hexane	U	0.5	"							
2-Hexanone	U	0.5	"							
Isopropyl alcohol	U	0.5	"							

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Blank (BB00304-BLK1)				Prepared: 01/21/2020 05:12		Analyzed: 01/21/2020 13:51				
Methyl tert-Butyl Ether	U	0.5	ppbv							
4-Methyl-2-pentanone	U	0.5	"							
Methylene Chloride	U	0.5	"							
Naphthalene	U	0.5	"							UL
Propylene	U	0.5	"							
Styrene	U	0.5	"							
1,1,2,2-Tetrachloroethane	U	0.5	"							
Tetrachloroethene	U	0.5	"							
Tetrahydrofuran	U	0.5	"							
Toluene	U	0.5	"							
1,2,4-Trichlorobenzene	U	0.5	"							UL
1,1,1-Trichloroethane	U	0.5	"							
1,1,2-Trichloroethane	U	0.5	"							
Trichloroethene	U	0.5	"							
Trichlorofluoromethane	U	0.5	"							
1,2,4-Trimethylbenzene	U	0.5	"							
1,3,5-Trimethylbenzene	U	0.5	"							
Vinyl acetate	U	0.5	"							
Vinyl chloride	U	0.5	"							
m,p-Xylene	U	1.0	"							
o-Xylene	U	0.5	"							
Surrogate: Bromofluorobenzene	*9.22*		*"*	*10.000*		*92*	*80-120*			
Blank (BB00304-BLK2)				Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 14:41				
Acetone	U	0.5	ppbv							
Benzene	U	0.5	"							
Benzyl chloride	U	0.5	"							UJ
Bromodichloromethane	U	0.5	"							
Bromoform	U	0.5	"							
Bromomethane	U	0.5	"							
1,3-Butadiene	U	0.5	"							
2-Butanone	U	0.5	"							
Carbon disulfide	U	0.5	"							
Carbon Tetrachloride	U	0.5	"							
Chlorobenzene	U	0.5	"							
Chloroethane	U	0.5	"							
Chloroform	U	0.5	"							
Chloromethane	U	0.5	"							
Cyclohexane	U	0.5	"							
Dibromochloromethane	U	0.5	"							
1,2-Dibromoethane (EDB)	U	0.5	"							

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Blank (BB00304-BLK2)				Prepared: 01/22/2020 05:12	Analyzed: 01/22/2020 14:41					
1,2-Dichlorobenzene	U	0.5	ppbv							
1,3-Dichlorobenzene	U	0.5	"							
1,4-Dichlorobenzene	U	0.5	"							
Dichlorodifluoromethane	U	0.5	"							
1,1-Dichloroethane	U	0.5	"							
1,2-Dichloroethane	U	0.5	"							
1,1-Dichloroethene	U	0.5	"							
cis-1,2-Dichloroethene	U	0.5	"							
trans-1,2-Dichloroethene	U	0.5	"							
1,2-Dichloropropane	U	0.5	"							
cis-1,3-Dichloropropene	U	0.5	"							
trans-1,3-Dichloropropene	U	0.5	"							
Dichlorotetrafluoroethane	U	0.5	"							
1,4-Dioxane	U	0.5	"							
Ethanol	U	0.5	"							
Ethyl Acetate	U	0.5	"							
Ethylbenzene	U	0.5	"							
4-Ethyltoluene	U	0.5	"							
Freon 113	U	0.5	"							
Heptane	U	0.5	"							
Hexachlorobutadiene	U	0.5	"							
Hexane	U	0.5	"							
2-Hexanone	U	0.5	"							
Isopropyl alcohol	U	0.5	"							
Methyl tert-Butyl Ether	U	0.5	"							
4-Methyl-2-pentanone	U	0.5	"							
Methylene Chloride	U	0.5	"							
Naphthalene	U	0.5	"							UL
Propylene	U	0.5	"							
Styrene	U	0.5	"							
1,1,2,2-Tetrachloroethane	U	0.5	"							
Tetrachloroethene	U	0.5	"							
Tetrahydrofuran	U	0.5	"							
Toluene	U	0.5	"							
1,2,4-Trichlorobenzene	U	0.5	"							UL
1,1,1-Trichloroethane	U	0.5	"							
1,1,2-Trichloroethane	U	0.5	"							
Trichloroethene	U	0.5	"							
Trichlorofluoromethane	U	0.5	"							
1,2,4-Trimethylbenzene	U	0.5	"							
1,3,5-Trimethylbenzene	U	0.5	"							

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Blank (BB00304-BLK2)				Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 14:41				
Vinyl acetate	U	0.5	ppbv							
Vinyl chloride	U	0.5	"							
m,p-Xylene	U	1.0	"							
o-Xylene	U	0.5	"							
Surrogate: Bromofluorobenzene	*9.13*		"	*10.000*		*91*	*80-120*			
LCS (BB00304-BS1)				Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 20:40				
Acetone	6.41300	0.5	ppbv	5.0000		128	70-130			
Benzene	6.01400	0.5	"	5.0000		120	70-130			
Benzyl chloride	6.86900	0.5	"	5.0000		137	70-130			A
Bromodichloromethane	5.69900	0.5	"	5.0000		114	70-130			
Bromoform	4.53900	0.5	"	5.0000		91	70-130			
Bromomethane	5.89000	0.5	"	5.0000		118	70-130			
1,3-Butadiene	5.88400	0.5	"	5.0000		118	70-130			
2-Butanone	6.20000	0.5	"	5.0000		124	70-130			
Carbon disulfide	6.16500	0.5	"	5.0000		123	70-130			
Carbon Tetrachloride	5.36300	0.5	"	5.0000		107	70-130			
Chlorobenzene	5.32000	0.5	"	5.0000		106	70-130			
Chloroethane	6.44100	0.5	"	5.0000		129	70-130			
Chloroform	5.79700	0.5	"	5.0000		116	70-130			
Chloromethane	6.13200	0.5	"	5.0000		123	70-130			
Cyclohexane	6.23600	0.5	"	5.0000		125	70-130			
Dibromochloromethane	5.25900	0.5	"	5.0000		105	70-130			
1,2-Dibromoethane (EDB)	5.57600	0.5	"	5.0000		112	70-130			
1,2-Dichlorobenzene	5.46200	0.5	"	5.0000		109	70-130			
1,3-Dichlorobenzene	5.68500	0.5	"	5.0000		114	70-130			
1,4-Dichlorobenzene	5.97200	0.5	"	5.0000		119	70-130			
Dichlorodifluoromethane	5.74700	0.5	"	5.0000		115	70-130			
1,1-Dichloroethane	6.18300	0.5	"	5.0000		124	70-130			
1,2-Dichloroethane	5.79700	0.5	"	5.0000		116	70-130			
1,1-Dichloroethene	6.07100	0.5	"	5.0000		121	70-130			
cis-1,2-Dichloroethene	6.47400	0.5	"	5.0000		129	70-130			
trans-1,2-Dichloroethene	6.09700	0.5	"	5.0000		122	70-130			
1,2-Dichloropropane	6.13600	0.5	"	5.0000		123	70-130			
cis-1,3-Dichloropropene	6.03200	0.5	"	5.0000		121	70-130			
trans-1,3-Dichloropropene	5.96000	0.5	"	5.0000		119	70-130			
Dichlorotetrafluoroethane	5.42800	0.5	"	5.0000		109	70-130			
1,4-Dioxane	5.94700	0.5	"	5.0000		119	70-130			
Ethanol	6.58700	0.5	"	5.0000		132	70-130			A
Ethyl Acetate	6.55900	0.5	"	5.0000		131	70-130			A
Ethylbenzene	5.47900	0.5	"	5.0000		110	70-130			

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
LCS (BB00304-BS1)				Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 20:40				
4-Ethyltoluene	5.59800	0.5	ppbv	5.0000		112	70-130			
Freon 113	5.49200	0.5	"	5.0000		110	70-130			
Heptane	6.19700	0.5	"	5.0000		124	70-130			
Hexachlorobutadiene	4.81500	0.5	"	5.0000		96	70-130			
Hexane	6.29200	0.5	"	5.0000		126	70-130			
2-Hexanone	6.80200	0.5	"	5.0000		136	70-130			A
Isopropyl alcohol	6.66600	0.5	"	5.0000		133	70-130			A
Methyl tert-Butyl Ether	6.04400	0.5	"	5.0000		121	70-130			
4-Methyl-2-pentanone	6.26800	0.5	"	5.0000		125	70-130			
Methylene Chloride	6.06900	0.5	"	5.0000		121	70-130			
Naphthalene	6.13300	0.5	"	5.0000		123	70-130			
Propylene	6.35900	0.5	"	5.0000		127	70-130			
Styrene	5.42300	0.5	"	5.0000		108	70-130			
1,1,2,2-Tetrachloroethane	5.71200	0.5	"	5.0000		114	70-130			
Tetrachloroethene	5.25200	0.5	"	5.0000		105	70-130			
Tetrahydrofuran	6.19200	0.5	"	5.0000		124	70-130			
Toluene	5.79200	0.5	"	5.0000		116	70-130			
1,2,4-Trichlorobenzene	5.93600	0.5	"	5.0000		119	70-130			
1,1,1-Trichloroethane	5.59200	0.5	"	5.0000		112	70-130			
1,1,2-Trichloroethane	5.71800	0.5	"	5.0000		114	70-130			
Trichloroethene	5.59300	0.5	"	5.0000		112	70-130			
Trichlorofluoromethane	5.65300	0.5	"	5.0000		113	70-130			
1,2,4-Trimethylbenzene	5.45000	0.5	"	5.0000		109	70-130			
1,3,5-Trimethylbenzene	5.38300	0.5	"	5.0000		108	70-130			
Vinyl acetate	6.24900	0.5	"	5.0000		125	70-130			
Vinyl chloride	5.78500	0.5	"	5.0000		116	70-130			
m,p-Xylene	10.9460	1.0	"	10.000		109	70-130			
o-Xylene	5.44000	0.5	"	5.0000		109	70-130			
Surrogate: Bromofluorobenzene	*10.0*		"	*10.000*		*100*	*80-120*			

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Matrix Spike (BB00304-MS1)		**Source: 2001012-02RE1**		Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 18:51				
Acetone	7.11200	0.5	ppbv	5.0000	0.819000	126	70-130			
Benzene	6.01400	0.5	"	5.0000	U	120	70-130			
Benzyl chloride	6.66400	0.5	"	5.0000	U	133	70-130			A
Bromodichloromethane	5.66800	0.5	"	5.0000	U	113	70-130			
Bromoform	4.47300	0.5	"	5.0000	U	89	70-130			
Bromomethane	5.78900	0.5	"	5.0000	U	116	70-130			
1,3-Butadiene	5.87000	0.5	"	5.0000	U	117	70-130			
2-Butanone	6.17600	0.5	"	5.0000	U	124	70-130			
Carbon disulfide	6.11400	0.5	"	5.0000	U	122	70-130			
Carbon Tetrachloride	5.34500	0.5	"	5.0000	U	107	70-130			
Chlorobenzene	5.29800	0.5	"	5.0000	U	106	70-130			
Chloroethane	6.29800	0.5	"	5.0000	U	126	70-130			
Chloroform	5.74800	0.5	"	5.0000	U	115	70-130			
Chloromethane	6.16100	0.5	"	5.0000	U	123	70-130			
Cyclohexane	6.24200	0.5	"	5.0000	U	125	70-130			
Dibromochloromethane	5.14600	0.5	"	5.0000	U	103	70-130			
1,2-Dibromoethane (EDB)	5.47700	0.5	"	5.0000	U	110	70-130			
1,2-Dichlorobenzene	5.39000	0.5	"	5.0000	U	108	70-130			
1,3-Dichlorobenzene	5.57200	0.5	"	5.0000	U	111	70-130			
1,4-Dichlorobenzene	5.87100	0.5	"	5.0000	U	117	70-130			
Dichlorodifluoromethane	5.62100	0.5	"	5.0000	U	112	70-130			
1,1-Dichloroethane	6.17100	0.5	"	5.0000	U	123	70-130			
1,2-Dichloroethane	5.78300	0.5	"	5.0000	U	116	70-130			
1,1-Dichloroethene	6.02100	0.5	"	5.0000	U	120	70-130			
cis-1,2-Dichloroethene	6.47600	0.5	"	5.0000	U	130	70-130			
trans-1,2-Dichloroethene	6.10600	0.5	"	5.0000	U	122	70-130			
1,2-Dichloropropane	6.08900	0.5	"	5.0000	U	122	70-130			
cis-1,3-Dichloropropene	5.96200	0.5	"	5.0000	U	119	70-130			
trans-1,3-Dichloropropene	5.85800	0.5	"	5.0000	U	117	70-130			
Dichlorotetrafluoroethane	5.39500	0.5	"	5.0000	U	108	70-130			
1,4-Dioxane	5.88200	0.5	"	5.0000	U	118	70-130			
Ethanol	18.3710	0.5	"	5.0000	12.3790	120	70-130			
Ethyl Acetate	6.52500	0.5	"	5.0000	U	130	70-130			
Ethylbenzene	5.46900	0.5	"	5.0000	U	109	70-130			
4-Ethyltoluene	5.58600	0.5	"	5.0000	U	112	70-130			
Freon 113	5.69400	0.5	"	5.0000	0.284000	108	70-130			
Heptane	6.22600	0.5	"	5.0000	U	125	70-130			
Hexachlorobutadiene	4.78800	0.5	"	5.0000	U	96	70-130			
Hexane	6.31000	0.5	"	5.0000	U	126	70-130			
2-Hexanone	6.77800	0.5	"	5.0000	U	136	70-130			A
Isopropyl alcohol	6.72800	0.5	"	5.0000	U	135	70-130			A

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Matrix Spike (BB00304-MS1)		**Source: 2001012-02RE1**		Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 18:51				
Methyl tert-Butyl Ether	5.96700	0.5	ppbv	5.0000	U	119	70-130			
4-Methyl-2-pentanone	6.21200	0.5	"	5.0000	U	124	70-130			
Methylene Chloride	6.02400	0.5	"	5.0000	U	120	70-130			
Naphthalene	6.01000	0.5	"	5.0000	U	120	70-130			
Propylene	7.08100	0.5	"	5.0000	U	142	70-130			A
Styrene	5.41100	0.5	"	5.0000	U	108	70-130			
1,1,2,2-Tetrachloroethane	5.73700	0.5	"	5.0000	U	115	70-130			
Tetrachloroethene	5.12700	0.5	"	5.0000	U	103	70-130			
Tetrahydrofuran	6.18700	0.5	"	5.0000	U	124	70-130			
Toluene	5.76000	0.5	"	5.0000	U	115	70-130			
1,2,4-Trichlorobenzene	5.60300	0.5	"	5.0000	U	112	70-130			
1,1,1-Trichloroethane	5.57900	0.5	"	5.0000	U	112	70-130			
1,1,2-Trichloroethane	5.67300	0.5	"	5.0000	U	113	70-130			
Trichloroethene	5.56500	0.5	"	5.0000	U	111	70-130			
Trichlorofluoromethane	5.61600	0.5	"	5.0000	U	112	70-130			
1,2,4-Trimethylbenzene	5.45700	0.5	"	5.0000	U	109	70-130			
1,3,5-Trimethylbenzene	5.39800	0.5	"	5.0000	U	108	70-130			
Vinyl acetate	6.26700	0.5	"	5.0000	U	125	70-130			
Vinyl chloride	5.79900	0.5	"	5.0000	U	116	70-130			
m,p-Xylene	10.9350	1.0	"	10.000	U	109	70-130			
o-Xylene	5.47100	0.5	"	5.0000	U	109	70-130			
Surrogate: Bromofluorobenzene	*10.1*		"	*10.000*		*101*	*80-120*			
Matrix Spike Dup (BB00304-MSD1)		**Source: 2001012-02RE1**		Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 19:45				
Acetone	7.17000	0.5	ppbv	5.0000	0.819000	127	70-130	0.9	25	
Benzene	6.01600	0.5	"	5.0000	U	120	70-130	0.03	25	
Benzyl chloride	7.03600	0.5	"	5.0000	U	141	70-130	5	25	A
Bromodichloromethane	5.68300	0.5	"	5.0000	U	114	70-130	0.3	25	
Bromoform	4.54800	0.5	"	5.0000	U	91	70-130	2	25	
Bromomethane	5.85400	0.5	"	5.0000	U	117	70-130	1	25	
1,3-Butadiene	5.89400	0.5	"	5.0000	U	118	70-130	0.4	25	
2-Butanone	6.28300	0.5	"	5.0000	U	126	70-130	2	25	
Carbon disulfide	6.15600	0.5	"	5.0000	U	123	70-130	0.7	25	
Carbon Tetrachloride	5.34900	0.5	"	5.0000	U	107	70-130	0.07	25	
Chlorobenzene	5.32800	0.5	"	5.0000	U	107	70-130	0.6	25	
Chloroethane	6.37600	0.5	"	5.0000	U	128	70-130	1	25	
Chloroform	5.79400	0.5	"	5.0000	U	116	70-130	0.8	25	
Chloromethane	6.14500	0.5	"	5.0000	U	123	70-130	0.3	25	
Cyclohexane	6.25300	0.5	"	5.0000	U	125	70-130	0.2	25	
Dibromochloromethane	5.24300	0.5	"	5.0000	U	105	70-130	2	25	
1,2-Dibromoethane (EDB)	5.58500	0.5	"	5.0000	U	112	70-130	2	25	

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Matrix Spike Dup (BB00304-MSD1)		**Source: 2001012-02RE1**		Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 19:45				
1,2-Dichlorobenzene	5.49000	0.5	ppbv	5.0000	U	110	70-130	2	25	
1,3-Dichlorobenzene	5.73900	0.5	"	5.0000	U	115	70-130	3	25	
1,4-Dichlorobenzene	6.05700	0.5	"	5.0000	U	121	70-130	3	25	
Dichlorodifluoromethane	5.77900	0.5	"	5.0000	U	116	70-130	3	25	
1,1-Dichloroethane	6.17200	0.5	"	5.0000	U	123	70-130	0.02	25	
1,2-Dichloroethane	5.79100	0.5	"	5.0000	U	116	70-130	0.1	25	
1,1-Dichloroethene	6.08000	0.5	"	5.0000	U	122	70-130	1	25	
cis-1,2-Dichloroethene	6.50200	0.5	"	5.0000	U	130	70-130	0.4	25	
trans-1,2-Dichloroethene	6.11200	0.5	"	5.0000	U	122	70-130	0.1	25	
1,2-Dichloropropane	6.14200	0.5	"	5.0000	U	123	70-130	0.9	25	
cis-1,3-Dichloropropene	6.04000	0.5	"	5.0000	U	121	70-130	1	25	
trans-1,3-Dichloropropene	5.94800	0.5	"	5.0000	U	119	70-130	2	25	
Dichlorotetrafluoroethane	5.42900	0.5	"	5.0000	U	109	70-130	0.6	25	
1,4-Dioxane	5.99900	0.5	"	5.0000	U	120	70-130	2	25	
Ethanol	19.0800	0.5	"	5.0000	12.3790	134	70-130	11	25	A
Ethyl Acetate	6.59900	0.5	"	5.0000	U	132	70-130	1	25	A
Ethylbenzene	5.52500	0.5	"	5.0000	U	110	70-130	1	25	
4-Ethyltoluene	5.62800	0.5	"	5.0000	U	113	70-130	0.7	25	
Freon 113	5.75600	0.5	"	5.0000	0.284000	109	70-130	1	25	
Heptane	6.16300	0.5	"	5.0000	U	123	70-130	1	25	
Hexachlorobutadiene	4.80700	0.5	"	5.0000	U	96	70-130	0.4	25	
Hexane	6.35700	0.5	"	5.0000	U	127	70-130	0.7	25	
2-Hexanone	6.81200	0.5	"	5.0000	U	136	70-130	0.5	25	A
Isopropyl alcohol	6.86200	0.5	"	5.0000	U	137	70-130	2	25	A
Methyl tert-Butyl Ether	6.03200	0.5	"	5.0000	U	121	70-130	1	25	
4-Methyl-2-pentanone	6.24300	0.5	"	5.0000	U	125	70-130	0.5	25	
Methylene Chloride	6.09100	0.5	"	5.0000	U	122	70-130	1	25	
Naphthalene	6.19800	0.5	"	5.0000	U	124	70-130	3	25	
Propylene	7.15000	0.5	"	5.0000	U	143	70-130	1	25	A
Styrene	5.47600	0.5	"	5.0000	U	110	70-130	1	25	
1,1,2,2-Tetrachloroethane	5.73300	0.5	"	5.0000	U	115	70-130	0.07	25	
Tetrachloroethene	5.20500	0.5	"	5.0000	U	104	70-130	2	25	
Tetrahydrofuran	6.17800	0.5	"	5.0000	U	124	70-130	0.1	25	
Toluene	5.77600	0.5	"	5.0000	U	116	70-130	0.3	25	
1,2,4-Trichlorobenzene	5.96400	0.5	"	5.0000	U	119	70-130	6	25	
1,1,1-Trichloroethane	5.60400	0.5	"	5.0000	U	112	70-130	0.4	25	
1,1,2-Trichloroethane	5.74300	0.5	"	5.0000	U	115	70-130	1	25	
Trichloroethene	5.62100	0.5	"	5.0000	U	112	70-130	1	25	
Trichlorofluoromethane	5.66200	0.5	"	5.0000	U	113	70-130	0.8	25	
1,2,4-Trimethylbenzene	5.48500	0.5	"	5.0000	U	110	70-130	0.5	25	
1,3,5-Trimethylbenzene	5.39400	0.5	"	5.0000	U	108	70-130	0.07	25	

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB00304 - TO-15 prep ESAT										
Matrix Spike Dup (BB00304-MSD1)		**Source: 2001012-02RE1**		Prepared: 01/22/2020 05:12		Analyzed: 01/22/2020 19:45				
Vinyl acetate	6.28500	0.5	ppbv	5.0000	U	126	70-130	0.3	25	
Vinyl chloride	5.82400	0.5	"	5.0000	U	116	70-130	0.4	25	
m,p-Xylene	10.9920	1.0	"	10.000	U	110	70-130	0.5	25	
o-Xylene	5.46400	0.5	"	5.0000	U	109	70-130	0.1	25	
Surrogate: Bromofluorobenzene	*10.1*		*"*	*10.000*		*101*	*80-120*			

Site Name: **FORMER FEDERAL-MOGUL SITE** **Project #: DAS R35733**

Notes and Definitions

UL	The analyte was not detected. The quantitation limit is probably higher due to indications of a low bias.
UJ	The analyte was not detected at or above the quantitation limit. The quantitation limit is an estimate.
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.
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. Reported value is an estimate.
J	The identification of the analyte is acceptable; the reported value is an estimate.
A	Quality control value is outside acceptance limits.
%REC	Percent Recovery
RPD	Relative Percent Difference
U	Analyte included in the analysis, but not detected at or above the quantitation limit.
NR	Not Reported

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