

CLIENT: Mactec
Work Order: 119710
Project: Metro Westside Extention, 4953101567

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-75419	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/9/2011	RunNo: 136528						
Client ID: PBS	Batch ID: 75419	TestNo: EPA 7471A		Analysis Date: 9/12/2011	SeqNo: 2238486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

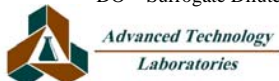
Sample ID: LCS-75419	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/9/2011	RunNo: 136528						
Client ID: LCSS	Batch ID: 75419	TestNo: EPA 7471A		Analysis Date: 9/12/2011	SeqNo: 2238487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.909	0.10	0.8300	0	110	80	120				

Sample ID: 119706-001A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/9/2011	RunNo: 136528						
Client ID: ZZZZZZ	Batch ID: 75419	TestNo: EPA 7471A		Analysis Date: 9/12/2011	SeqNo: 2238488						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.957	0.10	0.8300	0.06439	107	70	130				H

Sample ID: 119706-001A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/9/2011	RunNo: 136528						
Client ID: ZZZZZZ	Batch ID: 75419	TestNo: EPA 7471A		Analysis Date: 9/12/2011	SeqNo: 2238489						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.954	0.10	0.8300	0.06439	107	70	130	0.9565	0.311	20	H

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: MB-75465	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/12/2011	RunNo: 136567						
Client ID: PBS	Batch ID: 75465	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/13/2011	SeqNo: 2239313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	10									
ORO	ND	10									
Surr: p-Terphenyl	66.520		80.00		83.2	63	152				

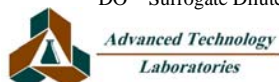
Sample ID: LCS-75465	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/12/2011	RunNo: 136567						
Client ID: LCSS	Batch ID: 75465	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/13/2011	SeqNo: 2239314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	924.970	10	1000	0	92.5	76	139				
Surr: p-Terphenyl	74.270		80.00		92.8	63	152				

Sample ID: 119787-003AMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/12/2011	RunNo: 136567						
Client ID: ZZZZZ	Batch ID: 75465	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/13/2011	SeqNo: 2239315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	890.520	10	1000	0	89.1	60	158				
Surr: p-Terphenyl	64.730		80.00		80.9	63	152				

Sample ID: 119787-003AMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/12/2011	RunNo: 136567						
Client ID: ZZZZZ	Batch ID: 75465	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/13/2011	SeqNo: 2239316						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	890.670	10	1000	0	89.1	60	158	890.5	0.0168	20	
Surr: p-Terphenyl	65.530		80.00		81.9	63	152		0	0	

Qualifiers:

- | | | |
|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_GAS

Sample ID: E110908LC1	SampType: LCS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 136458						
Client ID: LCSS	Batch ID: E11VS320	TestNo: EPA 8015B(M)		Analysis Date: 9/8/2011	SeqNo: 2237189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.337	1.0	5.000	0	107	70	130				
Surr: Bromofluorobenzene (FID)	124.921		100.0		125	62	153				

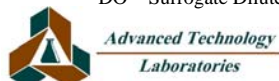
Sample ID: E110908MB1MS	SampType: MS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 136458						
Client ID: ZZZZZZ	Batch ID: E11VS320	TestNo: EPA 8015B(M)		Analysis Date: 9/8/2011	SeqNo: 2237190						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.014	1.0	5.000	0	100	49	131				
Surr: Bromofluorobenzene (FID)	113.395		100.0		113	62	153				

Sample ID: E110908MB1MSD	SampType: MSD	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 136458						
Client ID: ZZZZZZ	Batch ID: E11VS320	TestNo: EPA 8015B(M)		Analysis Date: 9/8/2011	SeqNo: 2237191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.933	1.0	5.000	0	98.7	49	131	5.014	1.63	20	
Surr: Bromofluorobenzene (FID)	113.815		100.0		114	62	153		0	0	

Sample ID: E110908MB1	SampType: MBLK	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 136458						
Client ID: PBS	Batch ID: E11VS320	TestNo: EPA 8015B(M)		Analysis Date: 9/8/2011	SeqNo: 2237192						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	81.015		100.0		81.0	62	153				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

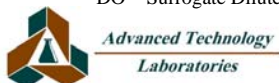
Sample ID: K110908LCS2		SampType: LCS		TestCode: 8260_S		Units: µg/Kg		Prep Date:		RunNo: 136478	
Client ID: LCSS		Batch ID: K11VS212		TestNo: EPA 8260B		Analysis Date: 9/8/2011				SeqNo: 2237595	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	45.180	5.0	50.00	0	90.4	70	130				
Benzene	102.300	5.0	100.0	0	102	70	130				
Chlorobenzene	53.630	5.0	50.00	0	107	82	130				
MTBE	52.140	5.0	50.00	0	104	70	130				
Toluene	105.530	5.0	100.0	0	106	70	130				
Trichloroethene	51.990	5.0	50.00	0	104	77	130				
Surr: 1,2-Dichloroethane-d4	42.070		50.00		84.1	70	130				
Surr: 4-Bromofluorobenzene	47.850		50.00		95.7	70	130				
Surr: Dibromofluoromethane	43.790		50.00		87.6	70	130				
Surr: Toluene-d8	46.280		50.00		92.6	70	130				

Sample ID: K110908MB1MS		SampType: MS		TestCode: 8260_S		Units: µg/Kg		Prep Date:		RunNo: 136478	
Client ID: ZZZZZ		Batch ID: K11VS212		TestNo: EPA 8260B		Analysis Date: 9/8/2011				SeqNo: 2237597	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.710	5.0	50.00	0	87.4	70	130				
Benzene	100.470	5.0	100.0	0	100	70	130				
Chlorobenzene	53.520	5.0	50.00	0	107	70	130				
MTBE	50.030	5.0	50.00	0	100	70	130				
Toluene	103.400	5.0	100.0	0	103	70	130				
Trichloroethene	51.420	5.0	50.00	0	103	70	130				
Surr: 1,2-Dichloroethane-d4	41.390		50.00		82.8	70	130				
Surr: 4-Bromofluorobenzene	47.950		50.00		95.9	70	130				
Surr: Dibromofluoromethane	43.460		50.00		86.9	70	130				
Surr: Toluene-d8	46.640		50.00		93.3	70	130				

Sample ID: K110908MB1MSD		SampType: MSD		TestCode: 8260_S		Units: µg/Kg		Prep Date:		RunNo: 136478	
Client ID: ZZZZZ		Batch ID: K11VS212		TestNo: EPA 8260B		Analysis Date: 9/8/2011				SeqNo: 2237598	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
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ANALYTICAL QC SUMMARY REPORT

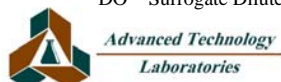
TestCode: 8260_S

Sample ID: K110908MB1MSD	SampType: MSD	TestCode: 8260_S	Units: µg/Kg	Prep Date:	RunNo: 136478						
Client ID: ZZZZZZ	Batch ID: K11VS212	TestNo: EPA 8260B		Analysis Date: 9/8/2011	SeqNo: 2237598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.370	5.0	50.00	0	84.7	70	130	43.71	3.11	20	
Benzene	97.910	5.0	100.0	0	97.9	70	130	100.5	2.58	20	
Chlorobenzene	51.940	5.0	50.00	0	104	70	130	53.52	3.00	20	
MTBE	50.360	5.0	50.00	0	101	70	130	50.03	0.657	20	
Toluene	101.250	5.0	100.0	0	101	70	130	103.4	2.10	20	
Trichloroethene	49.940	5.0	50.00	0	99.9	70	130	51.42	2.92	20	
Surr: 1,2-Dichloroethane-d4	41.400		50.00		82.8	70	130		0	0	
Surr: 4-Bromofluorobenzene	47.350		50.00		94.7	70	130		0	0	
Surr: Dibromofluoromethane	43.830		50.00		87.7	70	130		0	0	
Surr: Toluene-d8	46.730		50.00		93.5	70	130		0	0	

Sample ID: K110908MB1	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date:	RunNo: 136478						
Client ID: PBS	Batch ID: K11VS212	TestNo: EPA 8260B		Analysis Date: 9/8/2011	SeqNo: 2237599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									

Qualifiers:

- | | | |
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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

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ANALYTICAL QC SUMMARY REPORT

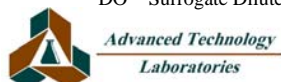
TestCode: 8260_S

Sample ID: K110908MB1	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date:	RunNo: 136478
Client ID: PBS	Batch ID: K11VS212	TestNo: EPA 8260B		Analysis Date: 9/8/2011	SeqNo: 2237599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,2-Dichloroethene	ND	5.0									
cis-1,3-Dichloropropene	ND	5.0									
Di-isopropyl ether	ND	5.0									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethyl Tert-butyl ether	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									

Qualifiers:

- | | | |
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ANALYTICAL QC SUMMARY REPORT

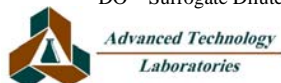
TestCode: 8260_S

Sample ID: K110908MB1	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date:	RunNo: 136478
Client ID: PBS	Batch ID: K11VS212	TestNo: EPA 8260B		Analysis Date: 9/8/2011	SeqNo: 2237599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	5.0									
MTBE	ND	5.0									
n-Butylbenzene	ND	5.0									
n-Propylbenzene	ND	5.0									
Naphthalene	ND	5.0									
o-Xylene	ND	5.0									
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
Tert-amyl methyl ether	ND	5.0									
Tert-Butanol	ND	100									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									
Surr: 1,2-Dichloroethane-d4	43.120		50.00		86.2	70	130				
Surr: 4-Bromofluorobenzene	46.390		50.00		92.8	70	130				
Surr: Dibromofluoromethane	43.620		50.00		87.2	70	130				
Surr: Toluene-d8	46.810		50.00		93.6	70	130				

Qualifiers:

- | | | |
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CHAIN OF CUSTODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: 201106374 Quote #: _____
 Logged By: [Signature] Date: 9/7/11
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:
 Method of Transport: Client ATL OnTrac
 FedEx GSO Other: _____
 Sample Condition Upon Receipt: 2.0
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: MATREK Address: 5628 E. Stawson Ave TEL: 323-889-5300
 Attn: Matt Fraychinead City: LA State: CA Zip Code: 90040 FAX: _____
 Project Name: Metro Westside Extension Project #: 4453101561 Sampler: [Signature]
 Relinquished by: (Signature and Printed Name) Date: 9/7/11 Time: 10:10 Received by: (Signature and Printed Name) Date: 9/7/11 Time: 11:30
 Relinquished by: (Signature and Printed Name) Date: 9/7/11 Time: 11:56 Received by: (Signature and Printed Name) Date: 9/7/11 Time: 11:56

I hereby authorize ATL to perform the work indicated below:
 Project Mgr./Submitter: [Signature] Date: 9/7/11
 Print Name: Matt Fraychinead Signature: [Signature]
 Send Request To: _____
 Attn: _____ City: _____ State: _____ Zip: _____
 Co: _____
 Address: _____
 City: _____ State: _____ Zip: _____

Special Instructions/Comments:

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
 • Sample : \$2.00 / sample / mo (after 45 days)
 • Records : \$1.00 / ATL workorder / mo (after 1 year)

ITEM	LAB USE ONLY:		Sample Description	
	Batch #:	Lab No.	Sample I.D. / Location	Date Time
	119710-007	2	E-134-10'	9/6/11 1145
		3	E-134-15'	1155
		4	E-134-20'	1205
		5	E-134-25'	1217
		6	E-134-30'	1230
		7	E-134-35'	1245
		8	E-134-40'	1257
			E-134-45'	1330

Circle or Add Analysis(es) Requested

8081A (Pesticides)	
8250B (Nitrates)	X
8270C (BNA)	X
8010B (Total Metal)	X
8015B (GRO) / 8021 (BTEX)	X
8015B (DRO) (TOX)	X
TITLE 22 / CAM 17 (6010 / 7000)	X

SPECIFY APPROPRIATE MATRIX

Container(s)	TAT #	Type
SEDIMENT	X	
SOIL	X	
DRINKING WATER	X	
WASTEWATER	X	
STORMWATER	X	
AQUEOUS	X	

QA/QC

RTNE <input type="checkbox"/>	REMARKS
CT <input type="checkbox"/>	Hold
Legal <input type="checkbox"/>	"
SWRCB <input type="checkbox"/>	Hold
Logcode <input type="checkbox"/>	"
OTHER	Hold

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

Figure I-1.1042

September 21, 2011



Matt Fraychineaud
Mactec
5628 E. Slauson Avenue,
Los Angeles, CA 90040-2922
TEL: (323) 889-5300
FAX:

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
Workorder No.: 119804

RE: Metro Westside Extension, 45951-10-1561


Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on September 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,


Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



CLIENT: Mactec
Project: Metro Westside Extension, 45951-10-1561
Lab Order: 119804

CASE NARRATIVE

All volatile analyses were performed using 5035 preservation requirements. Any high level dilutions were performed on a preserved methanol sample unless otherwise noted.

Analytical Comments for EPA 8260B

Samples 119810-006CMS and 119810-006EMSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-20'
Lab Order:	119804	Collection Date:	9/12/2011 11:25:00 AM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110918A	QC Batch: 75615			PrepDate: 9/16/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	9/18/2011 05:12 PM
ORO	ND	10		mg/Kg	1	9/18/2011 05:12 PM
Surr: p-Terphenyl	88.3	62-136		%REC	1	9/18/2011 05:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-20'
Lab Order: 119804	Collection Date: 9/12/2011 11:25:00 AM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-003B	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL		
1,1,1,2-Tetrachloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1,1-Trichloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1,2,2-Tetrachloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1,2-Trichloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1-Dichloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1-Dichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,1-Dichloropropene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2,3-Trichlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2,3-Trichloropropane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2,4-Trichlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2,4-Trimethylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2-Dibromo-3-chloropropane	ND	8.9	µg/Kg	1	9/17/2011 12:30 AM
1,2-Dibromoethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2-Dichlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2-Dichloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,2-Dichloropropane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,3,5-Trimethylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,3-Dichlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,3-Dichloropropane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
1,4-Dichlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
2,2-Dichloropropane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
2-Chlorotoluene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
4-Chlorotoluene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
4-Isopropyltoluene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Benzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Bromobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Bromodichloromethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Bromoform	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Bromomethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Carbon tetrachloride	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Chlorobenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Chloroethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Chloroform	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Chloromethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
cis-1,2-Dichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-20'
Lab Order: 119804	Collection Date: 9/12/2011 11:25:00 AM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-003B	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Di-isopropyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Dibromochloromethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Dibromomethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Dichlorodifluoromethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Ethyl Tert-butyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Ethylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Hexachlorobutadiene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Isopropylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
m,p-Xylene	ND	8.9	µg/Kg	1	9/17/2011 12:30 AM
Methylene chloride	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
MTBE	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
n-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
n-Propylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Naphthalene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
o-Xylene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
sec-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Styrene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Tert-amyl methyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Tert-Butanol	ND	89	µg/Kg	1	9/17/2011 12:30 AM
tert-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Tetrachloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Toluene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
trans-1,2-Dichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Trichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Trichlorofluoromethane	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Vinyl chloride	ND	4.5	µg/Kg	1	9/17/2011 12:30 AM
Surr: 1,2-Dichloroethane-d4	95.5	65-135	%REC	1	9/17/2011 12:30 AM
Surr: 4-Bromofluorobenzene	90.3	57-126	%REC	1	9/17/2011 12:30 AM
Surr: Dibromofluoromethane	86.0	72-121	%REC	1	9/17/2011 12:30 AM
Surr: Toluene-d8	83.4	80-107	%REC	1	9/17/2011 12:30 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-20'
Lab Order: 119804	Collection Date: 9/12/2011 11:25:00 AM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-003E	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC2_110915A	QC Batch: E11VS326	PrepDate: 9/12/2011	Analyst: TP		
GRO	ND	0.93	mg/Kg	1	9/15/2011 12:17 PM
Surr: Bromofluorobenzene (FID)	106	44-168	%REC	1	9/15/2011 12:17 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-35'
Lab Order: 119804	Collection Date: 9/12/2011 12:00:00 PM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-006A	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS

	EPA 3050B		EPA 6010B			
RunID: ICP8_110920C	QC Batch: 75656		PrepDate: 9/19/2011		Analyst: IL	
Antimony	ND	2.0	mg/Kg	1	9/20/2011 01:44 PM	
Arsenic	15	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Barium	110	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Beryllium	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Cadmium	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Chromium	31	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Cobalt	7.6	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Copper	20	2.0	mg/Kg	1	9/20/2011 01:44 PM	
Lead	6.3	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Molybdenum	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Nickel	21	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Selenium	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Silver	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Thallium	ND	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Vanadium	47	1.0	mg/Kg	1	9/20/2011 01:44 PM	
Zinc	51	1.0	mg/Kg	1	9/20/2011 01:44 PM	

MERCURY BY COLD VAPOR TECHNIQUE

			EPA 7471A			
RunID: AA1_110919B	QC Batch: 75636		PrepDate: 9/19/2011		Analyst: VV	
Mercury	ND	0.10	mg/Kg	1	9/19/2011 04:46 PM	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-40'
Lab Order:	119804	Collection Date:	9/12/2011 12:10:00 PM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-007A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110918A	QC Batch: 75615			PrepDate: 9/16/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	9/18/2011 05:22 PM
ORO	ND	10		mg/Kg	1	9/18/2011 05:22 PM
Surr: p-Terphenyl	87.3	62-136		%REC	1	9/18/2011 05:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-40'
Lab Order: 119804	Collection Date: 9/12/2011 12:10:00 PM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-007B	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL
1,1,1,2-Tetrachloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1,1-Trichloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1,2,2-Tetrachloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1,2-Trichloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1-Dichloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1-Dichloroethene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,1-Dichloropropene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2,3-Trichlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2,3-Trichloropropane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2,4-Trichlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2,4-Trimethylbenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2-Dibromo-3-chloropropane	ND	9.1	µg/Kg 1 9/17/2011 12:49 AM
1,2-Dibromoethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2-Dichlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2-Dichloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,2-Dichloropropane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,3,5-Trimethylbenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,3-Dichlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,3-Dichloropropane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
1,4-Dichlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
2,2-Dichloropropane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
2-Chlorotoluene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
4-Chlorotoluene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
4-Isopropyltoluene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Benzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Bromobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Bromodichloromethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Bromoform	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Bromomethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Carbon tetrachloride	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Chlorobenzene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Chloroethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Chloroform	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
Chloromethane	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM
cis-1,2-Dichloroethene	ND	4.5	µg/Kg 1 9/17/2011 12:49 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-40'
Lab Order: 119804	Collection Date: 9/12/2011 12:10:00 PM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-007B	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Di-isopropyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Dibromochloromethane	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Dibromomethane	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Dichlorodifluoromethane	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Ethyl Tert-butyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Ethylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Hexachlorobutadiene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Isopropylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
m,p-Xylene	ND	9.1	µg/Kg	1	9/17/2011 12:49 AM
Methylene chloride	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
MTBE	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
n-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
n-Propylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Naphthalene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
o-Xylene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
sec-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Styrene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Tert-amyl methyl ether	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Tert-Butanol	ND	91	µg/Kg	1	9/17/2011 12:49 AM
tert-Butylbenzene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Tetrachloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Toluene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
trans-1,2-Dichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Trichloroethene	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Trichlorofluoromethane	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Vinyl chloride	ND	4.5	µg/Kg	1	9/17/2011 12:49 AM
Surr: 1,2-Dichloroethane-d4	98.0	65-135	%REC	1	9/17/2011 12:49 AM
Surr: 4-Bromofluorobenzene	96.1	57-126	%REC	1	9/17/2011 12:49 AM
Surr: Dibromofluoromethane	89.9	72-121	%REC	1	9/17/2011 12:49 AM
Surr: Toluene-d8	88.9	80-107	%REC	1	9/17/2011 12:49 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT: Mactec	Client Sample ID: E-135-40'
Lab Order: 119804	Collection Date: 9/12/2011 12:10:00 PM
Project: Metro Westside Extension, 45951-10-1561	Matrix: SOIL
Lab ID: 119804-007E	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID				EPA 8015B(M)		
RunID: GC2_110915A	QC Batch: E11VS326	PrepDate: 9/12/2011	Analyst: TP			
GRO	ND	0.82	mg/Kg	1		9/15/2011 12:32 PM
Surr: Bromofluorobenzene (FID)	109	44-168	%REC	1		9/15/2011 12:32 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-60'
Lab Order:	119804	Collection Date:	9/12/2011 2:00:00 PM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-011A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110918A	QC Batch: 75615			PrepDate: 9/16/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	9/18/2011 05:32 PM
ORO	ND	10		mg/Kg	1	9/18/2011 05:32 PM
Surr: p-Terphenyl	81.2	62-136		%REC	1	9/18/2011 05:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-60'
Lab Order:	119804	Collection Date:	9/12/2011 2:00:00 PM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-011B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL		
1,1,1,2-Tetrachloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1,1-Trichloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1,2,2-Tetrachloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1,2-Trichloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1-Dichloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1-Dichloroethene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,1-Dichloropropene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2,3-Trichlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2,3-Trichloropropane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2,4-Trichlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2,4-Trimethylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2-Dibromo-3-chloropropane	ND	9.4	µg/Kg	1	9/17/2011 01:07 AM
1,2-Dibromoethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2-Dichlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2-Dichloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,2-Dichloropropane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,3,5-Trimethylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,3-Dichlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,3-Dichloropropane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
1,4-Dichlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
2,2-Dichloropropane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
2-Chlorotoluene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
4-Chlorotoluene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
4-Isopropyltoluene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Benzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Bromobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Bromodichloromethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Bromoform	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Bromomethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Carbon tetrachloride	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Chlorobenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Chloroethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Chloroform	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Chloromethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
cis-1,2-Dichloroethene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-60'
Lab Order:	119804	Collection Date:	9/12/2011 2:00:00 PM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-011B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_110916B	QC Batch: T11VS175	PrepDate: 9/12/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Di-isopropyl ether	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Dibromochloromethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Dibromomethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Dichlorodifluoromethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Ethyl Tert-butyl ether	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Ethylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Hexachlorobutadiene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Isopropylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
m,p-Xylene	ND	9.4	µg/Kg	1	9/17/2011 01:07 AM
Methylene chloride	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
MTBE	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
n-Butylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
n-Propylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Naphthalene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
o-Xylene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
sec-Butylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Styrene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Tert-amyl methyl ether	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Tert-Butanol	ND	94	µg/Kg	1	9/17/2011 01:07 AM
tert-Butylbenzene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Tetrachloroethene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Toluene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
trans-1,2-Dichloroethene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Trichloroethene	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Trichlorofluoromethane	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Vinyl chloride	ND	4.7	µg/Kg	1	9/17/2011 01:07 AM
Surr: 1,2-Dichloroethane-d4	93.4	65-135	%REC	1	9/17/2011 01:07 AM
Surr: 4-Bromofluorobenzene	89.6	57-126	%REC	1	9/17/2011 01:07 AM
Surr: Dibromofluoromethane	88.2	72-121	%REC	1	9/17/2011 01:07 AM
Surr: Toluene-d8	87.3	80-107	%REC	1	9/17/2011 01:07 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
 Print Date: 21-Sep-11

CLIENT:	Mactec	Client Sample ID:	E-135-60'
Lab Order:	119804	Collection Date:	9/12/2011 2:00:00 PM
Project:	Metro Westside Extension, 45951-10-1561	Matrix:	SOIL
Lab ID:	119804-011E		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

RunID: GC2_110915A	QC Batch: E11VS326	PrepDate: 9/12/2011	Analyst: TP		
GRO	ND	1.0	mg/Kg	1	9/15/2011 12:47 PM
Surr: Bromofluorobenzene (FID)	118	44-168	%REC	1	9/15/2011 12:47 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: MB-75656	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136824						
Client ID: PBS	Batch ID: 75656	TestNo: EPA 6010B EPA 3050B		Analysis Date: 9/20/2011	SeqNo: 2244055						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.162	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.730	1.0									

Sample ID: LCS-75656	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136824						
Client ID: LCSS	Batch ID: 75656	TestNo: EPA 6010B EPA 3050B		Analysis Date: 9/20/2011	SeqNo: 2244056						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.878	2.0	50.00	0.1618	95.4	80	120				
Arsenic	46.007	1.0	50.00	0	92.0	80	120				
Barium	48.650	1.0	50.00	0	97.3	80	120				
Beryllium	48.033	1.0	50.00	0	96.1	80	120				
Cadmium	46.986	1.0	50.00	0	94.0	80	120				
Chromium	44.897	1.0	50.00	0	89.8	80	120				
Cobalt	47.816	1.0	50.00	0	95.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

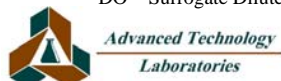
TestCode: 6010_S

Sample ID: LCS-75656	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136824						
Client ID: LCSS	Batch ID: 75656	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 9/20/2011	SeqNo: 2244056						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	47.863	2.0	50.00	0	95.7	80	120				
Lead	48.668	1.0	50.00	0	97.3	80	120				
Molybdenum	49.521	1.0	50.00	0	99.0	80	120				
Nickel	47.422	1.0	50.00	0	94.8	80	120				
Selenium	43.709	1.0	50.00	0	87.4	80	120				
Silver	47.492	1.0	50.00	0	95.0	80	120				
Thallium	46.643	1.0	50.00	0	93.3	80	120				
Vanadium	48.146	1.0	50.00	0	96.3	80	120				
Zinc	47.208	1.0	50.00	0.7296	93.0	80	120				

Sample ID: 119813-009A-MS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136824						
Client ID: ZZZZZZ	Batch ID: 75656	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 9/20/2011	SeqNo: 2244078						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	85.182	2.0	125.0	1.901	66.6	44	105				
Arsenic	99.129	1.0	125.0	7.597	73.2	57	103				
Barium	214.254	1.0	125.0	78.40	109	36	134				
Beryllium	101.450	1.0	125.0	0	81.2	64	106				
Cadmium	97.946	1.0	125.0	0.7896	77.7	58	102				
Chromium	121.214	1.0	125.0	28.49	74.2	55	105				
Cobalt	108.562	1.0	125.0	7.270	81.0	59	105				
Copper	189.965	2.0	125.0	75.59	91.5	64	117				
Lead	203.244	1.0	125.0	93.63	87.7	46	116				
Molybdenum	98.994	1.0	125.0	0	79.2	59	108				
Nickel	121.590	1.0	125.0	28.58	74.4	52	109				
Selenium	92.205	1.0	125.0	0	73.8	56	100				
Silver	102.598	1.0	125.0	0	82.1	65	107				
Thallium	87.034	1.0	125.0	0	69.6	47	100				
Vanadium	147.472	1.0	125.0	34.31	90.5	64	110				
Zinc	433.428	1.0	125.0	357.8	60.5	37	123				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

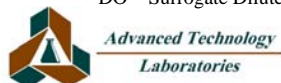
ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: 119813-009A-MSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136824						
Client ID: ZZZZZZ	Batch ID: 75656	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 9/20/2011	SeqNo: 2244079						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	89.548	2.0	125.0	1.901	70.1	44	105	85.18	5.00	20	
Arsenic	99.700	1.0	125.0	7.597	73.7	57	103	99.13	0.574	20	
Barium	223.769	1.0	125.0	78.40	116	36	134	214.3	4.34	20	
Beryllium	102.673	1.0	125.0	0	82.1	64	106	101.5	1.20	20	
Cadmium	98.441	1.0	125.0	0.7896	78.1	58	102	97.95	0.505	20	
Chromium	119.748	1.0	125.0	28.49	73.0	55	105	121.2	1.22	20	
Cobalt	109.116	1.0	125.0	7.270	81.5	59	105	108.6	0.509	20	
Copper	183.972	2.0	125.0	75.59	86.7	64	117	190.0	3.21	20	
Lead	201.488	1.0	125.0	93.63	86.3	46	116	203.2	0.868	20	
Molybdenum	99.873	1.0	125.0	0	79.9	59	108	98.99	0.884	20	
Nickel	119.849	1.0	125.0	28.58	73.0	52	109	121.6	1.44	20	
Selenium	93.005	1.0	125.0	0	74.4	56	100	92.21	0.864	20	
Silver	103.181	1.0	125.0	0	82.5	65	107	102.6	0.567	20	
Thallium	89.217	1.0	125.0	0	71.4	47	100	87.03	2.48	20	
Vanadium	145.051	1.0	125.0	34.31	88.6	64	110	147.5	1.66	20	
Zinc	415.531	1.0	125.0	357.8	46.2	37	123	433.4	4.22	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-75636	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136791						
Client ID: PBS	Batch ID: 75636	TestNo: EPA 7471A		Analysis Date: 9/19/2011	SeqNo: 2243358						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: LCS-75636	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136791						
Client ID: LCSS	Batch ID: 75636	TestNo: EPA 7471A		Analysis Date: 9/19/2011	SeqNo: 2243359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.861 0.10 0.8300 0 104 80 120

Sample ID: 119813-011A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136791						
Client ID: ZZZZZZ	Batch ID: 75636	TestNo: EPA 7471A		Analysis Date: 9/19/2011	SeqNo: 2243360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

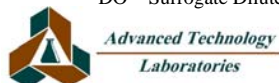
Mercury 0.855 0.10 0.8300 0.03076 99.3 70 130

Sample ID: 119813-011A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 9/19/2011	RunNo: 136791						
Client ID: ZZZZZZ	Batch ID: 75636	TestNo: EPA 7471A		Analysis Date: 9/19/2011	SeqNo: 2243361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.859 0.10 0.8300 0.03076 99.8 70 130 0.8550 0.460 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: MB-75615	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/16/2011	RunNo: 136771						
Client ID: PBS	Batch ID: 75615	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/18/2011	SeqNo: 2242869						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	ND	10									
ORO	ND	10									
Surr: p-Terphenyl	75.660		80.00		94.6	62	136				

Sample ID: LCS-75615	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/16/2011	RunNo: 136771						
Client ID: LCSS	Batch ID: 75615	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/18/2011	SeqNo: 2242870						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	979.200	10	1000	0	97.9	72	131				
Surr: p-Terphenyl	83.580		80.00		104	62	136				

Sample ID: 119804-011AMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/16/2011	RunNo: 136771						
Client ID: E-135-60'	Batch ID: 75615	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/18/2011	SeqNo: 2242871						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

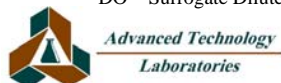
DRO	935.160	10	1000	0	93.5	64	131				
Surr: p-Terphenyl	81.530		80.00		102	62	136				

Sample ID: 119804-011AMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 9/16/2011	RunNo: 136771						
Client ID: E-135-60'	Batch ID: 75615	TestNo: EPA 8015B(M LUFT		Analysis Date: 9/18/2011	SeqNo: 2242872						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	935.050	10	1000	0	93.5	64	131	935.2	0.0118	20	
Surr: p-Terphenyl	80.700		80.00		101	62	136		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: E110915LC1	SampType: LCS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 136755						
Client ID: LCSS	Batch ID: E11VS326	TestNo: EPA 8015B(M)	Analysis Date: 9/15/2011	SeqNo: 2242413							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.269	1.0	5.000	0	105	70	130				
Surr: Bromofluorobenzene (FID)	129.880		100.0		130	44	168				

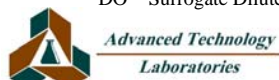
Sample ID: E110915MB1MS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 136755						
Client ID: ZZZZZZ	Batch ID: E11VS326	TestNo: EPA 8015B(M)	Analysis Date: 9/15/2011	SeqNo: 2242414							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.135	1.0	5.000	0	103	47	143				
Surr: Bromofluorobenzene (FID)	124.832		100.0		125	44	168				

Sample ID: E110915MB1MSD	SampType: MSD	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 136755						
Client ID: ZZZZZZ	Batch ID: E11VS326	TestNo: EPA 8015B(M)	Analysis Date: 9/15/2011	SeqNo: 2242415							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.219	1.0	5.000	0	104	47	143	5.135	1.62	20	
Surr: Bromofluorobenzene (FID)	109.227		100.0		109	44	168		0	0	

Sample ID: E110914MB1	SampType: MBLK	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 136755						
Client ID: PBS	Batch ID: E11VS326	TestNo: EPA 8015B(M)	Analysis Date: 9/15/2011	SeqNo: 2242416							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	91.301		100.0		91.3	44	168				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

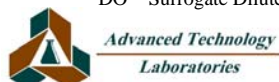
Sample ID: T110916LCS2		SampType: LCS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: LCSS		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242209	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	45.470	5.0	50.00	0	90.9	70	130				
Benzene	97.590	5.0	100.0	0	97.6	70	130				
Chlorobenzene	52.710	5.0	50.00	0	105	70	130				
MTBE	50.760	5.0	50.00	0	102	70	130				
Toluene	99.850	5.0	100.0	0	99.8	70	130				
Trichloroethene	48.650	5.0	50.00	0	97.3	70	130				
Surr: 1,2-Dichloroethane-d4	48.620		50.00		97.2	65	135				
Surr: 4-Bromofluorobenzene	47.260		50.00		94.5	57	126				
Surr: Dibromofluoromethane	43.240		50.00		86.5	72	121				
Surr: Toluene-d8	45.010		50.00		90.0	80	107				

Sample ID: T110916LCS2D		SampType: LCS2D		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: LCSS02		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242210	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	41.770	5.0	50.00	0	83.5	70	130	45.47	8.48	20	
Benzene	97.150	5.0	100.0	0	97.2	70	130	97.59	0.452	20	
Chlorobenzene	50.860	5.0	50.00	0	102	70	130	52.71	3.57	20	
MTBE	49.220	5.0	50.00	0	98.4	70	130	50.76	3.08	20	
Toluene	99.830	5.0	100.0	0	99.8	70	130	99.85	0.0200	20	
Trichloroethene	48.600	5.0	50.00	0	97.2	70	130	48.65	0.103	20	
Surr: 1,2-Dichloroethane-d4	45.280		50.00		90.6	65	135		0	0	
Surr: 4-Bromofluorobenzene	47.410		50.00		94.8	57	126		0	0	
Surr: Dibromofluoromethane	45.190		50.00		90.4	72	121		0	0	
Surr: Toluene-d8	46.430		50.00		92.9	80	107		0	0	

Sample ID: T110916MB2MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: ZZZZZ		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242211	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

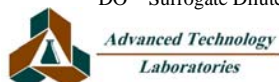
Sample ID: T110916MB2MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: ZZZZZZ		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242211	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	44.340	5.0	50.00	0	88.7	70	130				
Benzene	99.930	5.0	100.0	0	99.9	70	130				
Chlorobenzene	53.280	5.0	50.00	0	107	70	130				
MTBE	53.270	5.0	50.00	0	107	70	130				
Toluene	100.750	5.0	100.0	0	101	70	130				
Trichloroethene	50.110	5.0	50.00	0	100	70	130				
Surr: 1,2-Dichloroethane-d4	50.500		50.00		101	65	135				
Surr: 4-Bromofluorobenzene	46.210		50.00		92.4	57	126				
Surr: Dibromofluoromethane	47.170		50.00		94.3	72	121				
Surr: Toluene-d8	45.440		50.00		90.9	80	107				

Sample ID: T110916MB2MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: ZZZZZZ		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242212	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	41.940	5.0	50.00	0	83.9	70	130	44.34	5.56	20	
Benzene	96.300	5.0	100.0	0	96.3	70	130	99.93	3.70	20	
Chlorobenzene	50.930	5.0	50.00	0	102	70	130	53.28	4.51	20	
MTBE	48.240	5.0	50.00	0	96.5	70	130	53.27	9.91	20	
Toluene	95.790	5.0	100.0	0	95.8	70	130	100.8	5.05	20	
Trichloroethene	45.940	5.0	50.00	0	91.9	70	130	50.11	8.68	20	
Surr: 1,2-Dichloroethane-d4	46.300		50.00		92.6	65	135		0	0	
Surr: 4-Bromofluorobenzene	44.780		50.00		89.6	57	126		0	0	
Surr: Dibromofluoromethane	46.260		50.00		92.5	72	121		0	0	
Surr: Toluene-d8	44.010		50.00		88.0	80	107		0	0	

Sample ID: T110916MB2		SampType: MBLK		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 136742	
Client ID: PBS		Batch ID: T11VS175		TestNo: EPA 8260B		Analysis Date: 9/16/2011				SeqNo: 2242213	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110916MB2	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 136742						
Client ID: PBS	Batch ID: T11VS175	TestNo: EPA 8260B		Analysis Date: 9/16/2011	SeqNo: 2242213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									

Qualifiers:

- | | | |
|---|--|--|
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*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110916MB2	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 136742						
Client ID: PBS	Batch ID: T11VS175	TestNo: EPA 8260B		Analysis Date: 9/16/2011	SeqNo: 2242213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,2-Dichloroethene	ND	5.0									
cis-1,3-Dichloropropene	ND	5.0									
Di-isopropyl ether	ND	5.0									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethyl Tert-butyl ether	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methylene chloride	ND	5.0									
MTBE	ND	5.0									
n-Butylbenzene	ND	5.0									
n-Propylbenzene	ND	5.0									
Naphthalene	ND	5.0									
o-Xylene	ND	5.0									
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
Tert-amyl methyl ether	ND	5.0									
Tert-Butanol	ND	100									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									

Qualifiers:

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CLIENT: Mactec
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

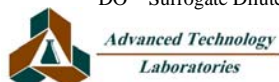
Sample ID: T110916MB2	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 136742						
Client ID: PBS	Batch ID: T11VS175	TestNo: EPA 8260B		Analysis Date: 9/16/2011	SeqNo: 2242213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									
Surr: 1,2-Dichloroethane-d4	48.560		50.00		97.1	65	135				
Surr: 4-Bromofluorobenzene	41.940		50.00		83.9	57	126				
Surr: Dibromofluoromethane	45.500		50.00		91.0	72	121				
Surr: Toluene-d8	44.300		50.00		88.6	80	107				

Sample ID: 119810-006CMS	SampType: MS	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date: 9/13/2011	RunNo: 136742						
Client ID: ZZZZZ	Batch ID: T11VS175	TestNo: EPA 8260B		Analysis Date: 9/17/2011	SeqNo: 2242240						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	39.129	5.7	56.56	0	69.2	70	130				S
Benzene	90.271	5.7	113.1	0	79.8	70	130				
Chlorobenzene	47.421	5.7	56.56	0	83.8	70	130				
MTBE	51.482	5.7	56.56	0	91.0	70	130				
Toluene	92.104	5.7	113.1	0	81.4	70	130				
Trichloroethene	45.283	5.7	56.56	0	80.1	70	130				
Surr: 1,2-Dichloroethane-d4	53.043		56.56		93.8	65	135				
Surr: 4-Bromofluorobenzene	50.713		56.56		89.7	57	126				
Surr: Dibromofluoromethane	50.124		56.56		88.6	72	121				
Surr: Toluene-d8	48.394		56.56		85.6	80	107				

Sample ID: 119810-006EMSD	SampType: MSD	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date: 9/13/2011	RunNo: 136742						
Client ID: ZZZZZ	Batch ID: T11VS175	TestNo: EPA 8260B		Analysis Date: 9/17/2011	SeqNo: 2242241						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	35.949	5.8	57.87	0	62.1	70	130	39.13	8.47	20	S
Benzene	87.650	5.8	115.7	0	75.7	70	130	90.27	2.95	20	
Chlorobenzene	45.752	5.8	57.87	0	79.1	70	130	47.42	3.58	20	
MTBE	51.620	5.8	57.87	0	89.2	70	130	51.48	0.269	20	

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Mactec
Work Order: 119804
Project: Metro Westside Extension, 45951-10-1561

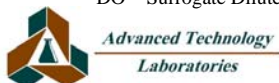
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: 119810-006EMSD	SampType: MSD	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date: 9/13/2011	RunNo: 136742						
Client ID: ZZZZZZ	Batch ID: T11VS175	TestNo: EPA 8260B	Analysis Date: 9/17/2011	SeqNo: 2242241							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	90.162	5.8	115.7	0	77.9	70	130	92.10	2.13	20	
Trichloroethene	42.975	5.8	57.87	0	74.3	70	130	45.28	5.23	20	
Surr: 1,2-Dichloroethane-d4	52.454		57.87		90.6	65	135		0	0	
Surr: 4-Bromofluorobenzene	52.188		57.87		90.2	57	126		0	0	
Surr: Dibromofluoromethane	48.507		57.87		83.8	72	121		0	0	
Surr: Toluene-d8	50.602		57.87		87.4	80	107		0	0	

Qualifiers:

- | | | |
|---|--|--|
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CHAIN OF CUSTODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel: (562) 989-4045 • Fax: (562) 989-4040

Client: **MACTEC**
 Attn: **Math Fraychinead**

Project Name: **Metro Westside Extension**

Relinquished by: (Signature and Printed Name) *Paul Kane*
 Relinquished by: (Signature and Printed Name) *Paul Kane*
 Relinquished by: (Signature and Printed Name) *Paul Kane*

I hereby authorize ATL to perform the work indicated below:
Project Mgr / Submitter: *Paul Kane*
 Print Name: *Paul Kane* Date: *9/13/11*
 Signature: *Paul Kane*

Quote #: **201106374** Date: _____
 Logged By: _____ Date: _____

NOTE: Please include your Quote No. to ensure proper pricing of your project.

Method of Transport:
 Client ATL
 FedEx OnTrac
 GSO
 Other: _____

Sample Condition Upon Receipt:
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Address: **5628 E Slanson Ave** City: **LA** State: **CA** Zip Code: **90040**
 TEL: **323-889-5300** FAX: _____
 Project #: **495-10-1861** Sampler: **Paul Kane** (Printed Name)
 Date: **9/13/11** Time: **11:50** Received by: (Signature and Printed Name) *Paul Kane*
 Date: **9/13/11** Time: **12:12** Received by: (Signature and Printed Name) *Paul Kane*
 Date: _____ Time: _____ Received by: (Signature and Printed Name) _____

Special Instructions/Comments:
 Bill To: _____
 Attn: _____
 Co: _____
 Addr: _____
 City: _____ State: _____ Zip: _____

LAB USE ONLY:

LAB Batch #:	Lab No.	Sample I.D. / Location	Date	Time
119804-1		E-135-10'	9/12/11	1115
	2	E-135-15'		1120
	3	E-135-20'		1125
	4	E-135-25'		1130
	5	E-135-30'		1145
	6	E-135-35'		1200
	7	E-135-40'		1210
	8	E-135-45'		1225
	9	E-135-50'		1245
	10	E-135-55'		1305

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
 • Sample : \$2.00 / sample / mo (after 45 days)
 • Records : \$1.00 / ATL workorder / mo (after 1 year)

SPECIFY APPROPRIATE MATRIX	Container(s)		TAT	Type	REMARKS
	#	Type			
SEDIMENT	X		E	IT	Hold
SOIL	X			IT	"
GROUND WATER	X			IT	Hold
WASTEWATER	X			IT	Hold
STORMWATER	X			IT	Hold
AQUEOUS	X			IT	Hold

Circle or Add Analysis(es) Requested:
 8081A (Pesticides) 8260B (PCB) 8270C (BNAs) 8010B (Total Metal) 8015B (GRO) / 8021 (BTEX) 8015B (DRO) (CO20) TITLE 22 / CAM 17 (6010 / 7000)

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC)₂ O=NaOH T=Na₂SO₃

Emergency Next workday B=Overnight ≤ 24 hrs A=TAT starts 8 a.m. following day if samples received after 5 p.m.

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Urgent 3 Workdays D=Critical 2 Workdays E=Routine 7 Workdays

Figure I-1.1070

CHAIN OF CUSTODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: 201106374 Quote #: _____
 Logged By: _____ Date: _____
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:
 Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: MACTEC Address: 5628 E. Slavson Ave TEL: 323-889-5300
 Attn: Matt Fraychineaud City: LA State: CA Zip Code: 90040 FAX: _____

Project Name: Metro Westside Extension Project #: 4953101561 Sampler: Paul Kane
 Relinquished by: (Signature and Printed Name) Date: 9/18/11 Time: 1150
 Relinquished by: (Signature and Printed Name) Date: 9/13/11 Time: 1212
 Relinquished by: (Signature and Printed Name) Date: _____ Time: _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: Paul Kane Date: 9/13/11
 Print Name: _____ Signature: _____
 City: _____ State: _____ Zip: _____

Send Report To: _____
 Attn: Matt Fraychineaud
 Co: _____
 Addr: _____
 City: _____ State: _____ Zip: _____

Bill To: _____
 Attn: _____
 Co: _____
 Addr: _____
 City: _____ State: _____ Zip: _____

Special Instructions/Comments: _____

LAB USE ONLY:

LAB Batch #	Lab No.	Sample I.D. / Location	Date	Time
<u>11604-11</u>	<u>135-60</u>	<u>E-135-60</u>	<u>9/12/11</u>	<u>1400</u>
<u>11604-17</u>	<u>135-65</u>	<u>E-135-65</u>	<u>↓</u>	<u>1420</u>
<u>11604-13</u>	<u>135-75</u>	<u>E-135-75</u>	<u>↓</u>	<u>1450</u>

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
 • Sample : \$2.00 / sample / mo (after 45 days)
 • Records : \$1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

8081A (Pesticides)	<input checked="" type="checkbox"/>
8082 (PCB)	<input checked="" type="checkbox"/>
8270C (BNA)	<input checked="" type="checkbox"/>
6010B (Total Metal)	<input checked="" type="checkbox"/>
8015B (DRO) (CORO)	<input checked="" type="checkbox"/>
8015B (GRO) / 8021 (PbEX)	<input checked="" type="checkbox"/>
TITLE 22 / CAM 17 (6010 / 7000)	<input checked="" type="checkbox"/>

SPECIFY APPROPRIATE MATRIX

Container(s)	TAT #	Type
SEDIMENT		
SOIL		
SOLID		
DRINKING WATER		
GROUND WATER		
WASTEWATER		
STORMWATER		
AQUEOUS		

QA / QC

RTME	<input type="checkbox"/>
CT	<input type="checkbox"/>
Legal	<input type="checkbox"/>
SWRCB	<input type="checkbox"/>
Logcode	<input type="checkbox"/>
OTHER	

REMARKS

7T Vial only
1+
11"

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

TAT: A= Overnight ≤ 24 hrs B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

• TAT starts 8 a.m. following day if samples received after 5 p.m.

Figure I-1.1071