


# CHAIN OF CUSTODY RECORD



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

P.O. # 201108817 Quote # \_\_\_\_\_  
 Logged By: [Signature] Date: 8/19/11  
**NOTE: Please include your Quote No. to ensure proper pricing of your project.**

**FOR LABORATORY USE ONLY**

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

Client: AMEC E & I (formerly MACTEC).  
 Attention: Anthony Marino  
 Project Name: MTA Westside Extension  
 Project #: 4953101561/6.2.3.3.  
 Address: 2171 Campus Drive, Suite 100  
 City: Irvine State: CA Zip Code: 92612  
 Tel: 949-224-0050 Fax: 949-224-0073

Relinquished by: [Signature] ANTHONY MARINO Date: 8/19/11 Time: 9:55  
 Relinquished by: [Signature] ANTHONY MARINO Date: 8/19/11 Time: 9:55  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Project Mgr / Submitter: ANTHONY MARINO Date: 8/19/11  
 I hereby authorize ATL to perform the work indicated below:  
 Special Instructions/Comments: \_\_\_\_\_

Send Report To: Attn: Anthony Marino  
 Co: AMEC E&I  
 Addr: 2171 Campus Drive, Suite 100  
 City: Irvine State: CA Zip: 92612

MDL/PQL Format NPDES Waste Discharge Requirements  
 Email report to: Ltran@mactec.com & Aamarino@mactec.com PO # \_\_\_\_\_  
 OK to run sample post holding time

LAB USE ONLY:  
 Batch #: \_\_\_\_\_ Lab No. 119461-011  
 Sample ID / Location: P-103 Aug 2011/UCLA Lot 36  
 Date: 8/19/2011 Time: 8:00

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 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested:  
 PH - SM 4500  
 MSAS - SM540C  
 Turbidity - 180.1  
 Residual Cl SM4500-Cl-B/4500-Cl-G  
 (CPMS Lead - EPA 6020/200.8)  
 (CPMS Selenium - EPA 6020/200.8)  
 (CPMS Zinc - EPA 6020/200.8)  
 Seepage Solids - SM 2540 F  
 60D520.C SM 52108

Container(s) TAT # Type  
 SPECIFY APPROPRIATE MATRIX  
 AQUEOUS  
 STORMWATER  
 WASTEWATER  
 DRINKING WATER  
 SOIL  
 SOLID  
 SEDIMENT  
 E 5 P

QA/QC  
 RTNE \_\_\_\_\_  
 CT \_\_\_\_\_  
 Legal \_\_\_\_\_  
 SWRCB Logcode \_\_\_\_\_  
 OTHER \_\_\_\_\_

REMARKS

Preservatives:  
 H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Figure H-1.91



**APPENDIX I**  
**ENVIRONMENTAL SITE ASSESSMENT**

**FIGURES I-1.1 THROUGH I-1.1071  
ANALYTICAL TEST RESULTS OF SOIL AND GROUNDWATER  
SAMPLES (PE PHASE)**

June 29, 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.: 118577

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on June 22, 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,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

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.





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**CLIENT:** Mactec  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1  
**Lab Order:** 118577

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**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.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-45
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:15:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-001A	

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

**EPA 8260B**

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
1,1,1,2-Tetrachloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1,1-Trichloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1,2,2-Tetrachloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1,2-Trichloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1-Dichloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1-Dichloroethene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,1-Dichloropropene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2,3-Trichlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2,3-Trichloropropane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2,4-Trichlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2,4-Trimethylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2-Dibromo-3-chloropropane	ND	7.8	µg/Kg	1	6/24/2011 04:16 PM
1,2-Dibromoethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2-Dichlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2-Dichloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,2-Dichloropropane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,3,5-Trimethylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,3-Dichlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,3-Dichloropropane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
1,4-Dichlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
2,2-Dichloropropane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
2-Chlorotoluene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
4-Chlorotoluene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
4-Isopropyltoluene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Benzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Bromobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Bromodichloromethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Bromoform	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Bromomethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Carbon tetrachloride	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Chlorobenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Chloroethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Chloroform	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Chloromethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
cis-1,2-Dichloroethene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-45
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:15:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-001A	

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

**EPA 8260B**

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Di-isopropyl ether	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Dibromochloromethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Dibromomethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Dichlorodifluoromethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Ethyl Tert-butyl ether	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Ethylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Hexachlorobutadiene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Isopropylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
m,p-Xylene	ND	7.8	µg/Kg	1	6/24/2011 04:16 PM
Methylene chloride	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
MTBE	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
n-Butylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
n-Propylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Naphthalene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
o-Xylene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
sec-Butylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Styrene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Tert-amyl methyl ether	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Tert-Butanol	ND	78	µg/Kg	1	6/24/2011 04:16 PM
tert-Butylbenzene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Tetrachloroethene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Toluene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
trans-1,2-Dichloroethene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Trichloroethene	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Trichlorofluoromethane	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Vinyl chloride	ND	3.9	µg/Kg	1	6/24/2011 04:16 PM
Surr: 1,2-Dichloroethane-d4	98.0	65-141	%REC	1	6/24/2011 04:16 PM
Surr: 4-Bromofluorobenzene	89.5	57-134	%REC	1	6/24/2011 04:16 PM
Surr: Dibromofluoromethane	89.3	70-128	%REC	1	6/24/2011 04:16 PM
Surr: Toluene-d8	88.0	72-123	%REC	1	6/24/2011 04:16 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-101-50
<b>Lab Order:</b>	118577	<b>Collection Date:</b>	6/21/2011 11:30:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118577-002A		

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

### EPA 8260B

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1-Dichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,1-Dichloropropene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2-Dibromo-3-chloropropane	ND	7.3	µg/Kg	1	6/24/2011 04:35 PM
1,2-Dibromoethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2-Dichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,2-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,3-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
2,2-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
2-Chlorotoluene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
4-Chlorotoluene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
4-Isopropyltoluene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Benzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Bromobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Bromodichloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Bromoform	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Bromomethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Carbon tetrachloride	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Chlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Chloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Chloroform	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Chloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-50
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:30:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-002A	

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

**EPA 8260B**

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Di-isopropyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Dibromochloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Dibromomethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Ethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Hexachlorobutadiene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Isopropylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
m,p-Xylene	ND	7.3	µg/Kg	1	6/24/2011 04:35 PM
Methylene chloride	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
MTBE	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
n-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
n-Propylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Naphthalene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
o-Xylene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
sec-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Styrene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Tert-Butanol	ND	73	µg/Kg	1	6/24/2011 04:35 PM
tert-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Tetrachloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Toluene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Trichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Trichlorofluoromethane	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Vinyl chloride	ND	3.6	µg/Kg	1	6/24/2011 04:35 PM
Surr: 1,2-Dichloroethane-d4	99.4	65-141	%REC	1	6/24/2011 04:35 PM
Surr: 4-Bromofluorobenzene	87.8	57-134	%REC	1	6/24/2011 04:35 PM
Surr: Dibromofluoromethane	101	70-128	%REC	1	6/24/2011 04:35 PM
Surr: Toluene-d8	89.1	72-123	%REC	1	6/24/2011 04:35 PM

<b>Qualifiers:</b>	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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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-55
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:50:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-003A	

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

**EPA 8260B**

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1-Dichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,1-Dichloropropene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2-Dibromo-3-chloropropane	ND	7.2	µg/Kg	1	6/24/2011 04:53 PM
1,2-Dibromoethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2-Dichloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,2-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,3-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
2,2-Dichloropropane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
2-Chlorotoluene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
4-Chlorotoluene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
4-Isopropyltoluene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Benzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Bromobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Bromodichloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Bromoform	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Bromomethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Carbon tetrachloride	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Chlorobenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Chloroethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Chloroform	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Chloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-55
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:50:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-003A	

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

**EPA 8260B**

RunID: MS5_110624A	QC Batch: T11VS109	PrepDate: 6/22/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Di-isopropyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Dibromochloromethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Dibromomethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Ethylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Hexachlorobutadiene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Isopropylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
m,p-Xylene	ND	7.2	µg/Kg	1	6/24/2011 04:53 PM
Methylene chloride	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
MTBE	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
n-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
n-Propylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Naphthalene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
o-Xylene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
sec-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Styrene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Tert-Butanol	89	72	µg/Kg	1	6/24/2011 04:53 PM
tert-Butylbenzene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Tetrachloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Toluene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Trichloroethene	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Trichlorofluoromethane	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Vinyl chloride	ND	3.6	µg/Kg	1	6/24/2011 04:53 PM
Surr: 1,2-Dichloroethane-d4	99.2	65-141	%REC	1	6/24/2011 04:53 PM
Surr: 4-Bromofluorobenzene	87.8	57-134	%REC	1	6/24/2011 04:53 PM
Surr: Dibromofluoromethane	96.1	70-128	%REC	1	6/24/2011 04:53 PM
Surr: Toluene-d8	87.0	72-123	%REC	1	6/24/2011 04:53 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-40-45
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 12:50:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 118577-004A	

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

**EPA 8260B**

RunID: MS2_110624A	QC Batch: Q11VW116	PrepDate:	Analyst: SLL
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1,1-Trichloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1,2-Trichloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1-Dichloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1-Dichloroethene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,1-Dichloropropene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2,3-Trichloropropane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2-Dibromoethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2-Dichlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2-Dichloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,2-Dichloropropane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,3-Dichlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,3-Dichloropropane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
1,4-Dichlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
2,2-Dichloropropane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
2-Chlorotoluene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
4-Chlorotoluene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
4-Isopropyltoluene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Benzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Bromobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Bromodichloromethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Bromoform	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Bromomethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Carbon tetrachloride	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Chlorobenzene	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Chloroethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Chloroform	ND	0.50	µg/L 1 6/24/2011 08:50 PM
Chloromethane	ND	0.50	µg/L 1 6/24/2011 08:50 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L 1 6/24/2011 08:50 PM

<b>Qualifiers:</b>	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: 06-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-101-40-45
<b>Lab Order:</b>	118577	<b>Collection Date:</b>	6/21/2011 12:50:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	118577-004A		

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

**EPA 8260B**

RunID: MS2_110624A	QC Batch: Q11VW116	PrepDate:	Analyst: SLL		
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Dibromochloromethane	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Dibromomethane	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Ethylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Isopropylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
m,p-Xylene	ND	1.0	µg/L	1	6/24/2011 08:50 PM
Methylene chloride	ND	1.0	µg/L	1	6/24/2011 08:50 PM
n-Butylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
n-Propylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Naphthalene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
o-Xylene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
sec-Butylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Styrene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
tert-Butylbenzene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Tetrachloroethene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Toluene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Trichloroethene	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Vinyl chloride	ND	0.50	µg/L	1	6/24/2011 08:50 PM
Surr: 1,2-Dichloroethane-d4	93.0	70-130	%REC	1	6/24/2011 08:50 PM
Surr: 4-Bromofluorobenzene	90.2	70-130	%REC	1	6/24/2011 08:50 PM
Surr: Dibromofluoromethane	94.2	70-130	%REC	1	6/24/2011 08:50 PM
Surr: Toluene-d8	89.7	70-130	%REC	1	6/24/2011 08:50 PM

<b>Qualifiers:</b>	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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

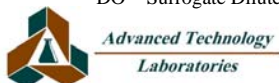
**TestCode: 8260\_S\_5035**

Sample ID: <b>T110624LCS1</b>	SampType: <b>LCS</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134388</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>T11VS109</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196672</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.350	5.0	50.00	0	86.7	70	130				
Benzene	88.700	5.0	100.0	0	88.7	70	130				
Chlorobenzene	48.510	5.0	50.00	0	97.0	70	130				
MTBE	44.080	5.0	50.00	0	88.2	70	130				
Toluene	93.300	5.0	100.0	0	93.3	70	130				
Trichloroethene	48.620	5.0	50.00	0	97.2	70	130				
Surr: 1,2-Dichloroethane-d4	39.000		50.00		78.0	65	141				
Surr: 4-Bromofluorobenzene	41.310		50.00		82.6	57	134				
Surr: Dibromofluoromethane	44.000		50.00		88.0	70	128				
Surr: Toluene-d8	43.430		50.00		86.9	72	123				

Sample ID: <b>T110624MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134388</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>T11VS109</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196673</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.660	5.0	50.00	0	85.3	70	130				
Benzene	91.380	5.0	100.0	0	91.4	70	130				
Chlorobenzene	49.980	5.0	50.00	0	100	70	130				
MTBE	45.810	5.0	50.00	0	91.6	70	130				
Toluene	94.460	5.0	100.0	0	94.5	70	130				
Trichloroethene	48.550	5.0	50.00	0	97.1	70	130				
Surr: 1,2-Dichloroethane-d4	40.740		50.00		81.5	65	141				
Surr: 4-Bromofluorobenzene	40.570		50.00		81.1	57	134				
Surr: Dibromofluoromethane	42.560		50.00		85.1	70	128				
Surr: Toluene-d8	42.910		50.00		85.8	72	123				

**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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

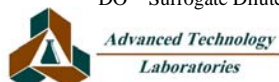
**TestCode: 8260\_S\_5035**

Sample ID: <b>T110624MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134388</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>T11VS109</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2196674</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.040	5.0	50.00	0	86.1	70	130	42.66	0.887	20	
Benzene	91.060	5.0	100.0	0	91.1	70	130	91.38	0.351	20	
Chlorobenzene	51.890	5.0	50.00	0	104	70	130	49.98	3.75	20	
MTBE	47.500	5.0	50.00	0	95.0	70	130	45.81	3.62	20	
Toluene	94.710	5.0	100.0	0	94.7	70	130	94.46	0.264	20	
Trichloroethene	48.650	5.0	50.00	0	97.3	70	130	48.55	0.206	20	
Surr: 1,2-Dichloroethane-d4	41.680		50.00		83.4	65	141		0	0	
Surr: 4-Bromofluorobenzene	46.330		50.00		92.7	57	134		0	0	
Surr: Dibromofluoromethane	43.590		50.00		87.2	70	128		0	0	
Surr: Toluene-d8	44.980		50.00		90.0	72	123		0	0	

Sample ID: <b>T110624MB1</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134388</b>	
Client ID: <b>PBS</b>		Batch ID: <b>T11VS109</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2196675</b>	
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:**

- |   |  |  |
|---|--|--|
| 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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>T110624MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134388</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS109</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196675</b>						
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:**

- |   |  |  |
|---|--|--|
| 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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

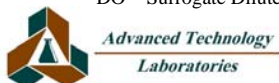
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: T110624MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 134388						
Client ID: PBS	Batch ID: T11VS109	TestNo: EPA 8260B		Analysis Date: 6/24/2011	SeqNo: 2196675						
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	42.770		50.00		85.5	65	141				
Surr: 4-Bromofluorobenzene	43.090		50.00		86.2	57	134				
Surr: Dibromofluoromethane	44.160		50.00		88.3	70	128				
Surr: Toluene-d8	45.380		50.00		90.8	72	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   |  |



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

**CLIENT:** Mactec  
**Work Order:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

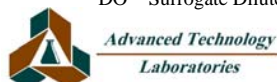
Sample ID: <b>Q110624LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134423</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>Q11VW116</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2198138</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.950	0.50	20.00	0	89.8	70	130				
Benzene	37.320	0.50	40.00	0	93.3	70	130				
Chlorobenzene	19.710	0.50	20.00	0	98.6	70	130				
MTBE	18.470	0.50	20.00	0	92.4	70	130				
Toluene	39.720	0.50	40.00	0	99.3	70	130				
Trichloroethene	19.250	0.50	20.00	0	96.2	70	130				
Surr: 1,2-Dichloroethane-d4	19.850		25.00		79.4	70	130				
Surr: 4-Bromofluorobenzene	22.960		25.00		91.8	70	130				
Surr: Dibromofluoromethane	20.660		25.00		82.6	70	130				
Surr: Toluene-d8	22.970		25.00		91.9	70	130				

Sample ID: <b>Q110624MB3MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134423</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW116</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2198139</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.510	0.50	20.00	0	82.6	70	130				
Benzene	36.700	0.50	40.00	0	91.8	70	130				
Chlorobenzene	19.810	0.50	20.00	0	99.0	70	130				
MTBE	18.540	0.50	20.00	0	92.7	70	130				
Toluene	38.260	0.50	40.00	0	95.7	70	130				
Trichloroethene	18.470	0.50	20.00	0	92.4	70	130				
Surr: 1,2-Dichloroethane-d4	19.890		25.00		79.6	70	130				
Surr: 4-Bromofluorobenzene	22.700		25.00		90.8	70	130				
Surr: Dibromofluoromethane	20.670		25.00		82.7	70	130				
Surr: Toluene-d8	22.470		25.00		89.9	70	130				

Sample ID: <b>Q110624MB3MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134423</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW116</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2198140</b>	
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           |
| 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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

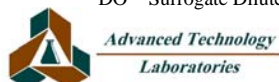
**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110624MB3MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134423</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>Q11VW116</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2198140</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	15.950	0.50	20.00	0	79.8	70	130	16.51	3.45	20	
Benzene	37.230	0.50	40.00	0	93.1	70	130	36.70	1.43	20	
Chlorobenzene	20.380	0.50	20.00	0	102	70	130	19.81	2.84	20	
MTBE	17.660	0.50	20.00	0	88.3	70	130	18.54	4.86	20	
Toluene	39.290	0.50	40.00	0	98.2	70	130	38.26	2.66	20	
Trichloroethene	18.540	0.50	20.00	0	92.7	70	130	18.47	0.378	20	
Surr: 1,2-Dichloroethane-d4	19.610		25.00		78.4	70	130		0	0	
Surr: 4-Bromofluorobenzene	23.220		25.00		92.9	70	130		0	0	
Surr: Dibromofluoromethane	20.660		25.00		82.6	70	130		0	0	
Surr: Toluene-d8	23.140		25.00		92.6	70	130		0	0	

Sample ID: <b>Q110624MB3</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134423</b>	
Client ID: <b>PBW</b>		Batch ID: <b>Q11VW116</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>				SeqNo: <b>2198141</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

**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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110624MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134423</b>						
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW116</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2198141</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Di-isopropyl ether	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethyl tert-butyl ether	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									

**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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Laboratories*

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

**CLIENT:** Mactec  
**Work Order:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

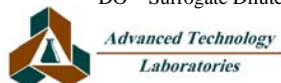
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110624MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134423</b>						
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW116</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2198141</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
Tert-amyl methyl ether	ND	0.50									
Tert-Butanol	ND	10									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.480		25.00		93.9	70	130				
Surr: 4-Bromofluorobenzene	23.770		25.00		95.1	70	130				
Surr: Dibromofluoromethane	23.300		25.00		93.2	70	130				
Surr: Toluene-d8	23.070		25.00		92.3	70	130				

**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   |  |



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

# CHAIN OF CUSTODY RECORD

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

Quote #: 201106374  
 Logged By: [Signature] Date: 6/22/11  
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

Method of Transport  
 Client  ATL  
 FedEx  OnTrac  
 GSO  
 Other: \_\_\_\_\_

Client: MACTEC Address: 5628 E. SLAUSON AVE State: CA Zip Code: 90040  
 Attn: MATT FRAYCHINEAUD City: LOS ANGELES State: CA Zip Code: 90040

Project Name: METRO WESTSIDE EXTENSION Project #: 4953-10-1561 Sampler: DWAIN D. SNYDER  
 Relinquished by: [Signature] Date: 6/22/11 Time: 8:25 Received by: [Signature] Date: 6/22/11 Time: 8:25  
 Relinquished by: [Signature] Date: 6/22/11 Time: 11:59 Received by: [Signature] Date: 6/22/11 Time: 11:59  
 Relinquished by: [Signature] Date: 6/22/11 Time: 15:30 Received by: [Signature] Date: 6/22/11 Time: 15:30

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr /Submitter: Matt Fraychineaud Date: 6/22/11  
[Signature] Date: 6/22/11

Special Instructions/Comments:  
None

Circle or Add Analysis(es) Requested:  
 8081A (Pesticides)   
 8082 (PCB)   
 8260B (Votiles)   
 8270C (BNA)   
 6010B (Total Metal)   
 8015B (GRO) / 8021 (BTEX)   
 8015B (DRO)   
 TITLE 22 / CAM 17 (6010 / 7000)

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)

LAB USE ONLY: Batch #:	Lab No.	Sample I.D. / Location	Date	Time	SPECIFY APPROPRIATE MATRIX		CONTAINERIZATION	QA/QC
					Container(s)	Type		
118577	E-101-45	6/21 11:15	6/21	11:15	SOIL	SOLID	E 3 V 33	2-55 Tube
6	E-101-50	6/21 11:30	6/21	11:30	SOIL	SOLID	E 4 V 33	1-55 Tube
7	E-101-55	6/21 11:50	6/21	11:50	SOIL	SOLID	E 4 V 33	1-55 Tube
7	E-101-40-45	6/21 12:50	6/21	12:50	SOIL	SOLID	E 3 V	

Preservatives:  
 H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Figure I-1.19



## **Carmen Aguila**

---

**From:** Fraychineaud, Matt [MFRAYCHINEAUD@mactec.com]  
**Sent:** Friday, June 24, 2011 7:16 AM  
**To:** Carmen Aguila  
**Subject:** Westside Extension Environmental Samples

Hi Carmen:

Margo called and left a message yesterday afternoon regarding the samples that were picked up.

1. Trip Blank: The field tech forgot to add to the COC. However, no need to analyze. Place on-hold.
2. 8260B Analysis: Please analyze the samples in the VOA vials that were preserved using the 5035 method. We're also including whatever soil we have remaining in the tubes for the TPH-d/o analyses or in the event we want to do any additional analyses.

Please call me on my cell if you have questions as I'll be in the field until about noon today. (818) 231-6980. Otherwise, you can try my office phone and leave a message.

Thanks.

Matt

**Matt Fraychineaud**  
**Principal Geologist**  
AMEC (formerly MACTEC Engineering and Consulting, Inc.)  
5628 East Slauson Avenue  
Los Angeles, CA 90040  
(323) 889-5310  
[mfraychineaud@mactec.com](mailto:mfraychineaud@mactec.com)

July 05, 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.: 118577

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

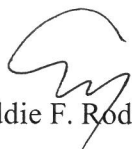
Enclosed are the results for sample(s) received on June 22, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

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 is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**  
 Print Date: 05-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-101-50
<b>Lab Order:</b> 118577	<b>Collection Date:</b> 6/21/2011 11:30:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118577-002D	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110705A	QC Batch: 74003			PrepDate: 6/30/2011	Analyst: <b>CBB</b>	
Antimony	ND	2.0		mg/Kg	1	7/5/2011 10:01 AM
Arsenic	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Barium	58	1.0		mg/Kg	1	7/5/2011 10:01 AM
Beryllium	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Cadmium	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Chromium	12	1.0		mg/Kg	1	7/5/2011 10:01 AM
Cobalt	5.9	1.0		mg/Kg	1	7/5/2011 10:01 AM
Copper	9.4	2.0		mg/Kg	1	7/5/2011 10:01 AM
Lead	2.7	1.0		mg/Kg	1	7/5/2011 10:01 AM
Molybdenum	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Nickel	10	1.0		mg/Kg	1	7/5/2011 10:01 AM
Selenium	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Silver	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Thallium	ND	1.0		mg/Kg	1	7/5/2011 10:01 AM
Vanadium	17	1.0		mg/Kg	1	7/5/2011 10:01 AM
Zinc	28	1.0		mg/Kg	1	7/5/2011 10:01 AM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110701B	QC Batch: 73991			PrepDate: 6/30/2011	Analyst: <b>VV</b>	
Mercury	ND	0.10		mg/Kg	1	7/1/2011 02:10 PM

<b>Qualifiers:</b>	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	



Advanced Technology  
Laboratories

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

**CLIENT:** Mactec  
**Work Order:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

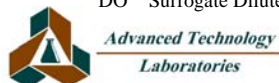
**TestCode: 6010\_S**

Sample ID: <b>MB-74003</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134650</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74003</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/5/2011</b>	SeqNo: <b>2202143</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	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	ND	1.0									

Sample ID: <b>LCS-74003</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134650</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74003</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/5/2011</b>	SeqNo: <b>2202144</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.133	2.0	50.00	0	98.3	80	120				
Arsenic	48.984	1.0	50.00	0	98.0	80	120				
Barium	49.573	1.0	50.00	0	99.1	80	120				
Beryllium	49.000	1.0	50.00	0	98.0	80	120				
Cadmium	47.871	1.0	50.00	0	95.7	80	120				
Chromium	46.119	1.0	50.00	0	92.2	80	120				
Cobalt	49.694	1.0	50.00	0	99.4	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:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

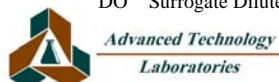
**TestCode: 6010\_S**

Sample ID: <b>LCS-74003</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/30/2011</b>		RunNo: <b>134650</b>	
Client ID: <b>LCSS</b>		Batch ID: <b>74003</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/5/2011</b>				SeqNo: <b>2202144</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	49.780	2.0	50.00	0	99.6	80	120				
Lead	50.249	1.0	50.00	0	100	80	120				
Molybdenum	52.097	1.0	50.00	0	104	80	120				
Nickel	49.339	1.0	50.00	0	98.7	80	120				
Selenium	45.793	1.0	50.00	0	91.6	80	120				
Silver	45.992	1.0	50.00	0	92.0	80	120				
Thallium	48.037	1.0	50.00	0	96.1	80	120				
Vanadium	50.233	1.0	50.00	0	100	80	120				
Zinc	48.739	1.0	50.00	0	97.5	80	120				

Sample ID: <b>118577-002D-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/30/2011</b>		RunNo: <b>134650</b>	
Client ID: <b>E-101-50</b>		Batch ID: <b>74003</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/5/2011</b>				SeqNo: <b>2202146</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	96.247	2.0	125.0	0	77.0	32	105				
Arsenic	105.925	1.0	125.0	0	84.7	49	106				
Barium	169.064	1.0	125.0	57.97	88.9	31	133				
Beryllium	106.725	1.0	125.0	0	85.4	56	106				
Cadmium	102.432	1.0	125.0	0.4138	81.6	51	103				
Chromium	114.610	1.0	125.0	12.09	82.0	45	114				
Cobalt	112.005	1.0	125.0	5.874	84.9	52	106				
Copper	123.669	2.0	125.0	9.371	91.4	54	125				
Lead	109.710	1.0	125.0	2.706	85.6	34	126				
Molybdenum	109.900	1.0	125.0	0.7144	87.3	54	106				
Nickel	113.696	1.0	125.0	10.30	82.7	45	111				
Selenium	100.378	1.0	125.0	0	80.3	47	104				
Silver	108.307	1.0	125.0	0	86.6	56	112				
Thallium	98.647	1.0	125.0	0	78.9	46	101				
Vanadium	129.371	1.0	125.0	17.16	89.8	54	114				
Zinc	131.921	1.0	125.0	28.37	82.8	28	125				

**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   |  |



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

**CLIENT:** Mactec  
**Work Order:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

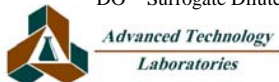
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>118577-002D-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/30/2011</b>		RunNo: <b>134650</b>	
Client ID: <b>E-101-50</b>		Batch ID: <b>74003</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/5/2011</b>		SeqNo: <b>2202147</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	93.812	2.0	125.0	0	75.0	32	105	96.25	2.56	20	
Arsenic	103.572	1.0	125.0	0	82.9	49	106	105.9	2.25	20	
Barium	163.587	1.0	125.0	57.97	84.5	31	133	169.1	3.29	20	
Beryllium	106.407	1.0	125.0	0	85.1	56	106	106.7	0.298	20	
Cadmium	101.718	1.0	125.0	0.4138	81.0	51	103	102.4	0.700	20	
Chromium	122.131	1.0	125.0	12.09	88.0	45	114	114.6	6.35	20	
Cobalt	111.973	1.0	125.0	5.874	84.9	52	106	112.0	0.0286	20	
Copper	122.704	2.0	125.0	9.371	90.7	54	125	123.7	0.783	20	
Lead	107.285	1.0	125.0	2.706	83.7	34	126	109.7	2.23	20	
Molybdenum	108.231	1.0	125.0	0.7144	86.0	54	106	109.9	1.53	20	
Nickel	117.018	1.0	125.0	10.30	85.4	45	111	113.7	2.88	20	
Selenium	98.625	1.0	125.0	0	78.9	47	104	100.4	1.76	20	
Silver	107.364	1.0	125.0	0	85.9	56	112	108.3	0.875	20	
Thallium	97.237	1.0	125.0	0	77.8	46	101	98.65	1.44	20	
Vanadium	128.842	1.0	125.0	17.16	89.3	54	114	129.4	0.410	20	
Zinc	130.041	1.0	125.0	28.37	81.3	28	125	131.9	1.44	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   |  |



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



**CLIENT:** Mactec  
**Work Order:** 118577  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-73991</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134630</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73991</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/1/2011</b>	SeqNo: <b>2201591</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: <b>LCS-73991</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134630</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73991</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/1/2011</b>	SeqNo: <b>2201592</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.810 0.10 0.8300 0 97.6 80 120

Sample ID: <b>118605-004A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134630</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73991</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/1/2011</b>	SeqNo: <b>2201593</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

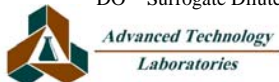
Mercury 0.853 0.10 0.8300 0.04964 96.8 70 130

Sample ID: <b>118605-004A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/30/2011</b>	RunNo: <b>134630</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73991</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/1/2011</b>	SeqNo: <b>2201594</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.856 0.10 0.8300 0.04964 97.2 70 130 0.8535 0.301 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   |  |



## Rachelle Arada

---

**From:** Fraychineaud, Matt [MFRAYCHINEAUD@mactec.com]  
**Sent:** Friday, June 24, 2011 3:07 PM  
**To:** Rachelle Arada  
**Cc:** Bing Roura  
**Subject:** Additional Analyses Request  
**Attachments:** Additional Analyses.pdf

Hi Rachelle:

Please see the attached chain of custody forms for additional analyses that we'd like to have conducted. The additions are shown in red ink and highlighted in yellow. Just call if you have questions.

Thanks.

Matt

**Matt Fraychineaud**  
**Principal Geologist**  
AMEC (formerly MACTEC Engineering and Consulting, Inc.)  
5628 East Slauson Avenue  
Los Angeles, CA 90040  
(323) 889-5310  
[mfraychineaud@mactec.com](mailto:mfraychineaud@mactec.com)



August 03, 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.: 119154

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 27, 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,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

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.



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**CLIENT:** Mactec  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1  
**Lab Order:** 119154

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**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 8015B(M) GRO

Sample 119010-007AMSD, RPD for Matrix Spike Duplicate (MSD) is outside criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).





**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-40
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 11:25:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-001A		

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL		
1,1,1,2-Tetrachloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1,1-Trichloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1,2,2-Tetrachloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1,2-Trichloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1-Dichloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1-Dichloroethene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,1-Dichloropropene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2,3-Trichlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2,3-Trichloropropane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2,4-Trichlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2,4-Trimethylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2-Dibromo-3-chloropropane	ND	8.1	µg/Kg	1	7/28/2011 01:43 PM
1,2-Dibromoethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2-Dichlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2-Dichloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,2-Dichloropropane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,3,5-Trimethylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,3-Dichlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,3-Dichloropropane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
1,4-Dichlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
2,2-Dichloropropane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
2-Chlorotoluene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
4-Chlorotoluene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
4-Isopropyltoluene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Benzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Bromobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Bromodichloromethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Bromoform	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Bromomethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Carbon tetrachloride	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Chlorobenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Chloroethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Chloroform	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Chloromethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
cis-1,2-Dichloroethene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM

<b>Qualifiers:</b>	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	



Advanced Technology  
Laboratories

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

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-40
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 11:25:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-001A		

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Di-isopropyl ether	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Dibromochloromethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Dibromomethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Dichlorodifluoromethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Ethyl Tert-butyl ether	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Ethylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Hexachlorobutadiene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Isopropylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
m,p-Xylene	ND	8.1	µg/Kg	1	7/28/2011 01:43 PM
Methylene chloride	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
MTBE	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
n-Butylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
n-Propylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Naphthalene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
o-Xylene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
sec-Butylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Styrene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Tert-amyl methyl ether	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Tert-Butanol	ND	81	µg/Kg	1	7/28/2011 01:43 PM
tert-Butylbenzene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Tetrachloroethene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Toluene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
trans-1,2-Dichloroethene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Trichloroethene	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Trichlorofluoromethane	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Vinyl chloride	ND	4.1	µg/Kg	1	7/28/2011 01:43 PM
Surr: 1,2-Dichloroethane-d4	118	65-141	%REC	1	7/28/2011 01:43 PM
Surr: 4-Bromofluorobenzene	90.7	57-134	%REC	1	7/28/2011 01:43 PM
Surr: Dibromofluoromethane	109	70-128	%REC	1	7/28/2011 01:43 PM
Surr: Toluene-d8	95.0	72-123	%REC	1	7/28/2011 01:43 PM

<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-40
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 11:25:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-001D	

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<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B(M)**

RunID: GC2_110729A	QC Batch: E11VS280	PrepDate: 7/26/2011	Analyst: <b>TP</b>		
GRO	ND	0.82	mg/Kg	1	7/29/2011 12:08 PM
Surr: Bromofluorobenzene (FID)	101	51-161	%REC	1	7/29/2011 12:08 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-40
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 11:25:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-001G	

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID**

		LUFT		EPA 8015B(M)		
RunID: GC16_110728C	QC Batch: 74603			PrepDate: 7/28/2011	Analyst: HL	
DRO	ND	10		mg/Kg	1	7/28/2011 06:28 PM
ORO	ND	10		mg/Kg	1	7/28/2011 06:28 PM
Surr: p-Terphenyl	85.5	63-152		%REC	1	7/28/2011 06:28 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-45
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 11:40:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-002A		

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1,1-Trichloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1,2,2-Tetrachloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1,2-Trichloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1-Dichloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1-Dichloroethene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,1-Dichloropropene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2,3-Trichlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2,3-Trichloropropane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2,4-Trichlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2,4-Trimethylbenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2-Dibromo-3-chloropropane	ND	7.8		µg/Kg	1	7/28/2011 02:01 PM
1,2-Dibromoethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2-Dichlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2-Dichloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,2-Dichloropropane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,3,5-Trimethylbenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,3-Dichlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,3-Dichloropropane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
1,4-Dichlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
2,2-Dichloropropane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
2-Chlorotoluene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
4-Chlorotoluene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
4-Isopropyltoluene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Benzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Bromobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Bromodichloromethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Bromoform	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Bromomethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Carbon tetrachloride	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Chlorobenzene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Chloroethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Chloroform	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
Chloromethane	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM
cis-1,2-Dichloroethene	ND	3.9		µg/Kg	1	7/28/2011 02:01 PM

<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-45
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 11:40:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-002A		

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Di-isopropyl ether	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Dibromochloromethane	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Dibromomethane	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Dichlorodifluoromethane	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Ethyl Tert-butyl ether	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Ethylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Hexachlorobutadiene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Isopropylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
m,p-Xylene	ND	7.8	µg/Kg	1	7/28/2011 02:01 PM
Methylene chloride	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
MTBE	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
n-Butylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
n-Propylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Naphthalene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
o-Xylene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
sec-Butylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Styrene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Tert-amyl methyl ether	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Tert-Butanol	ND	78	µg/Kg	1	7/28/2011 02:01 PM
tert-Butylbenzene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Tetrachloroethene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Toluene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
trans-1,2-Dichloroethene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Trichloroethene	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Trichlorofluoromethane	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Vinyl chloride	ND	3.9	µg/Kg	1	7/28/2011 02:01 PM
Surr: 1,2-Dichloroethane-d4	114	65-141	%REC	1	7/28/2011 02:01 PM
Surr: 4-Bromofluorobenzene	89.4	57-134	%REC	1	7/28/2011 02:01 PM
Surr: Dibromofluoromethane	105	70-128	%REC	1	7/28/2011 02:01 PM
Surr: Toluene-d8	95.7	72-123	%REC	1	7/28/2011 02:01 PM

<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-45
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 11:40:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-002D	

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

**EPA 8015B(M)**

RunID: GC2_110729A	QC Batch: E11VS280	PrepDate: 7/26/2011	Analyst: <b>TP</b>		
GRO	ND	0.75	mg/Kg	1	7/29/2011 12:23 PM
Surr: Bromofluorobenzene (FID)	86.5	51-161	%REC	1	7/29/2011 12:23 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-45
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 11:40:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-002G	

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID**

		LUFT	EPA 8015B(M)			
RunID: GC16_110728C	QC Batch: 74603				PrepDate: 7/28/2011	Analyst: HL
DRO	ND	10		mg/Kg	1	7/28/2011 06:38 PM
ORO	ND	10		mg/Kg	1	7/28/2011 06:38 PM
Surr: p-Terphenyl	89.4	63-152		%REC	1	7/28/2011 06:38 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-55
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 12:20:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-003A	

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL
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1,1,1,2-Tetrachloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1,1-Trichloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1,2,2-Tetrachloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1,2-Trichloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1-Dichloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1-Dichloroethene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,1-Dichloropropene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2,3-Trichlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2,3-Trichloropropane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2,4-Trichlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2,4-Trimethylbenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2-Dibromo-3-chloropropane	ND	7.5		µg/Kg	1	7/28/2011 02:19 PM
1,2-Dibromoethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2-Dichlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2-Dichloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,2-Dichloropropane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,3,5-Trimethylbenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,3-Dichlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,3-Dichloropropane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
1,4-Dichlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
2,2-Dichloropropane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
2-Chlorotoluene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
4-Chlorotoluene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
4-Isopropyltoluene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Benzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Bromobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Bromodichloromethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Bromoform	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Bromomethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Carbon tetrachloride	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Chlorobenzene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Chloroethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Chloroform	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
Chloromethane	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM
cis-1,2-Dichloroethene	ND	3.7		µg/Kg	1	7/28/2011 02:19 PM

<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-55
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 12:20:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-003A		

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

**EPA 8260B**

RunID: MS4_110728A	QC Batch: K11VS199	PrepDate: 7/26/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Di-isopropyl ether	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Dibromochloromethane	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Dibromomethane	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Dichlorodifluoromethane	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Ethyl Tert-butyl ether	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Ethylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Hexachlorobutadiene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Isopropylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
m,p-Xylene	ND	7.5	µg/Kg	1	7/28/2011 02:19 PM
Methylene chloride	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
MTBE	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
n-Butylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
n-Propylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Naphthalene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
o-Xylene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
sec-Butylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Styrene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Tert-amyl methyl ether	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Tert-Butanol	ND	75	µg/Kg	1	7/28/2011 02:19 PM
tert-Butylbenzene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Tetrachloroethene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Toluene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
trans-1,2-Dichloroethene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Trichloroethene	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Trichlorofluoromethane	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Vinyl chloride	ND	3.7	µg/Kg	1	7/28/2011 02:19 PM
Surr: 1,2-Dichloroethane-d4	113	65-141	%REC	1	7/28/2011 02:19 PM
Surr: 4-Bromofluorobenzene	90.9	57-134	%REC	1	7/28/2011 02:19 PM
Surr: Dibromofluoromethane	106	70-128	%REC	1	7/28/2011 02:19 PM
Surr: Toluene-d8	94.6	72-123	%REC	1	7/28/2011 02:19 PM

<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-55
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 12:20:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-003D	

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

**EPA 8015B(M)**

RunID: GC2_110729A	QC Batch: E11VS280	PrepDate: 7/26/2011	Analyst: <b>TP</b>		
GRO	ND	0.76	mg/Kg	1	7/29/2011 12:39 PM
Surr: Bromofluorobenzene (FID)	99.4	51-161	%REC	1	7/29/2011 12:39 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-55
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 12:20:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119154-003G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL &amp; MOTOR OIL RANGE ORGANICS BY GC/FID</b>						
	<b>LUFT</b>			<b>EPA 8015B(M)</b>		
RunID: GC16_110728C	QC Batch: 74603			PrepDate: 7/28/2011		Analyst: HL
DRO	ND	10		mg/Kg	1	7/28/2011 07:22 PM
ORO	ND	10		mg/Kg	1	7/28/2011 07:22 PM
Surr: p-Terphenyl	102	63-152		%REC	1	7/28/2011 07:22 PM

<b>Qualifiers:</b>	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: 03-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-102-GW  
**Lab Order:** 119154 **Collection Date:** 7/26/2011 10:35:00 AM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER  
**Lab ID:** 119154-004A

**Analyses Result PQL Qual Units DF Date Analyzed**

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS2_110801A	QC Batch: Q11VW142	PrepDate:	Analyst: BD		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
2-Chlorotoluene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
4-Chlorotoluene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Benzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Bromobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Bromodichloromethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Bromoform	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Bromomethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Carbon tetrachloride	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Chlorobenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Chloroethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Chloroform	ND	0.50	µg/L	1	8/1/2011 07:27 PM
Chloromethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM
cis-1,2-Dichloroethene	1.0	0.50	µg/L	1	8/1/2011 07:27 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: 03-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-102-GW  
**Lab Order:** 119154 **Collection Date:** 7/26/2011 10:35:00 AM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER  
**Lab ID:** 119154-004A

**Analyses Result PQL Qual Units DF Date Analyzed**

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS2_110801A	QC Batch:	Q11VW142	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Di-isopropyl ether	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Dibromochloromethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Dibromomethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Ethyl tert-butyl ether	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Ethylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Isopropylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
m,p-Xylene	ND	1.0	µg/L	1	8/1/2011 07:27 PM	
Methylene chloride	ND	1.0	µg/L	1	8/1/2011 07:27 PM	
MTBE	67	0.50	µg/L	1	8/1/2011 07:27 PM	
n-Butylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
n-Propylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Naphthalene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
o-Xylene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Styrene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Tert-amyl methyl ether	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Tert-Butanol	ND	10	µg/L	1	8/1/2011 07:27 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Tetrachloroethene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Toluene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Trichloroethene	0.59	0.50	µg/L	1	8/1/2011 07:27 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Vinyl chloride	ND	0.50	µg/L	1	8/1/2011 07:27 PM	
Surr: 1,2-Dichloroethane-d4	75.7	70-130	%REC	1	8/1/2011 07:27 PM	
Surr: 4-Bromofluorobenzene	97.1	70-130	%REC	1	8/1/2011 07:27 PM	
Surr: Dibromofluoromethane	89.2	70-130	%REC	1	8/1/2011 07:27 PM	
Surr: Toluene-d8	90.8	70-130	%REC	1	8/1/2011 07:27 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: 03-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-102-GW
<b>Lab Order:</b>	119154	<b>Collection Date:</b>	7/26/2011 10:35:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	119154-004B		

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

**EPA 8015B(M)**

RunID: GC19_110728B	QC Batch: M11VW148	PrepDate:	Analyst: <b>BB</b>		
GRO	0.22	0.20	mg/L	1	7/28/2011 06:36 PM
Surr: Bromofluorobenzene (FID)	88.3	70-130	%REC	1	7/28/2011 06:36 PM

<b>Qualifiers:</b>	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: 03-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-GW
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 10:35:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 119154-004C	

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL &amp; MOTOR OIL RANGE ORGANICS BY GC/FID</b>						
	<b>EPA 3510C</b>		<b>EPA 8015B(M)</b>			
RunID: GC16_110728B	QC Batch: 74588				PrepDate: 7/28/2011	Analyst: <b>CBR</b>
DRO	ND	0.24		mg/L	1	7/28/2011 04:22 PM
ORO	ND	0.24		mg/L	1	7/28/2011 04:22 PM
Surr: p-Terphenyl	71.7	36-126		%REC	1	7/28/2011 04:22 PM

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<b>Qualifiers:</b>	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: 03-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-102-50
<b>Lab Order:</b> 119154	<b>Collection Date:</b> 7/26/2011 12:00:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119154-006A	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

EPA 3050B		EPA 6010B				
RunID: ICP8_110729B	QC Batch: 74600				PrepDate: 7/28/2011	Analyst: IL
Antimony	ND	2.0		mg/Kg	1	7/29/2011 12:18 PM
Arsenic	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Barium	42	1.0		mg/Kg	1	7/29/2011 12:18 PM
Beryllium	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Cadmium	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Chromium	17	1.0		mg/Kg	1	7/29/2011 12:18 PM
Cobalt	8.7	1.0		mg/Kg	1	7/29/2011 12:18 PM
Copper	14	2.0		mg/Kg	1	7/29/2011 12:18 PM
Lead	2.1	1.0		mg/Kg	1	7/29/2011 12:18 PM
Molybdenum	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Nickel	23	1.0		mg/Kg	1	7/29/2011 12:18 PM
Selenium	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Silver	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Thallium	ND	1.0		mg/Kg	1	7/29/2011 12:18 PM
Vanadium	16	1.0		mg/Kg	1	7/29/2011 12:18 PM
Zinc	29	1.0		mg/Kg	1	7/29/2011 12:18 PM

**MERCURY BY COLD VAPOR TECHNIQUE**

EPA 7471A					
RunID: AA1_110729C	QC Batch: 74597	PrepDate: 7/28/2011	Analyst: VV		
Mercury	ND	0.10	mg/Kg	1	7/29/2011 02:05 PM

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



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**CLIENT:** Mactec  
**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

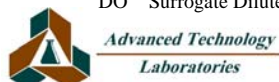
**TestCode: 6010\_S**

Sample ID: <b>MB-74600</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135431</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74600</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217404</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.309	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	0.103	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: <b>LCS-74600</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135431</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74600</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217405</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	48.905	2.0	50.00	0.3088	97.2	80	120				
Arsenic	47.898	1.0	50.00	0	95.8	80	120				
Barium	50.799	1.0	50.00	0	102	80	120				
Beryllium	50.448	1.0	50.00	0	101	80	120				
Cadmium	48.370	1.0	50.00	0	96.7	80	120				
Chromium	46.867	1.0	50.00	0	93.7	80	120				
Cobalt	50.429	1.0	50.00	0	101	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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

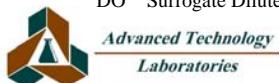
**TestCode: 6010\_S**

Sample ID: <b>LCS-74600</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/28/2011</b>		RunNo: <b>135431</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>74600</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/29/2011</b>		SeqNo: <b>2217405</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	50.713	2.0	50.00	0	101	80	120					
Lead	49.315	1.0	50.00	0	98.6	80	120					
Molybdenum	52.198	1.0	50.00	0	104	80	120					
Nickel	49.022	1.0	50.00	0	98.0	80	120					
Selenium	45.539	1.0	50.00	0	91.1	80	120					
Silver	49.347	1.0	50.00	0	98.7	80	120					
Thallium	47.524	1.0	50.00	0.1025	94.8	80	120					
Vanadium	49.994	1.0	50.00	0	100	80	120					
Zinc	48.983	1.0	50.00	0	98.0	80	120					

Sample ID: <b>119161-024A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/28/2011</b>		RunNo: <b>135431</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74600</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/29/2011</b>		SeqNo: <b>2217415</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	77.557	2.0	125.0	0.2274	61.9	32	105					
Arsenic	103.248	1.0	125.0	4.584	78.9	49	106					
Barium	192.037	1.0	125.0	92.15	79.9	31	133					
Beryllium	103.646	1.0	125.0	0	82.9	56	106					
Cadmium	99.734	1.0	125.0	0.4918	79.4	51	103					
Chromium	114.722	1.0	125.0	12.95	81.4	45	114					
Cobalt	109.751	1.0	125.0	5.905	83.1	52	106					
Copper	122.932	2.0	125.0	9.308	90.9	54	125					
Lead	104.978	1.0	125.0	6.117	79.1	34	126					
Molybdenum	103.175	1.0	125.0	0	82.5	54	106					
Nickel	106.288	1.0	125.0	9.743	77.2	45	111					
Selenium	96.840	1.0	125.0	0	77.5	47	104					
Silver	108.105	1.0	125.0	0	86.5	56	112					
Thallium	87.816	1.0	125.0	0	70.3	46	101					
Vanadium	142.434	1.0	125.0	28.68	91.0	54	114					
Zinc	139.950	1.0	125.0	38.81	80.9	28	125					

**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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

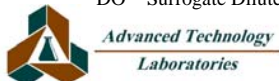
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>119161-024A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135431</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74600</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050B</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217416</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.366	2.0	125.0	0.2274	63.3	32	105	77.56	2.31	20	
Arsenic	103.300	1.0	125.0	4.584	79.0	49	106	103.2	0.0501	20	
Barium	187.251	1.0	125.0	92.15	76.1	31	133	192.0	2.52	20	
Beryllium	101.478	1.0	125.0	0	81.2	56	106	103.6	2.11	20	
Cadmium	98.166	1.0	125.0	0.4918	78.1	51	103	99.73	1.59	20	
Chromium	113.304	1.0	125.0	12.95	80.3	45	114	114.7	1.24	20	
Cobalt	108.267	1.0	125.0	5.905	81.9	52	106	109.8	1.36	20	
Copper	120.833	2.0	125.0	9.308	89.2	54	125	122.9	1.72	20	
Lead	104.749	1.0	125.0	6.117	78.9	34	126	105.0	0.218	20	
Molybdenum	103.229	1.0	125.0	0	82.6	54	106	103.2	0.0524	20	
Nickel	104.777	1.0	125.0	9.743	76.0	45	111	106.3	1.43	20	
Selenium	96.896	1.0	125.0	0	77.5	47	104	96.84	0.0582	20	
Silver	106.491	1.0	125.0	0	85.2	56	112	108.1	1.51	20	
Thallium	88.526	1.0	125.0	0	70.8	46	101	87.82	0.806	20	
Vanadium	140.689	1.0	125.0	28.68	89.6	54	114	142.4	1.23	20	
Zinc	137.096	1.0	125.0	38.81	78.6	28	125	139.9	2.06	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   |  |



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

**CLIENT:** Mactec  
**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-74597</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135439</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74597</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217501</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	ND	0.10									
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Sample ID: <b>LCS-74597</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135439</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74597</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217502</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.811	0.10	0.8300	0	97.8	80	120				
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Sample ID: <b>119134-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135439</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74597</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

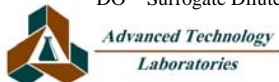
Mercury	0.840	0.10	0.8300	0.04434	95.9	70	130				
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Sample ID: <b>119134-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135439</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74597</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217505</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.833	0.10	0.8300	0.04434	95.0	70	130	0.8400	0.829	20	
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**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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_S\_DM H**

Sample ID: <b>MB-74603</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135423</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74603</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217230</b>						
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	80.230		80.00		100	63	152				

Sample ID: <b>LCS-74603</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135423</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74603</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217231</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1026.610	10	1000	0	103	76	139				
Surr: p-Terphenyl	84.630		80.00		106	63	152				

Sample ID: <b>119154-001GMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135423</b>						
Client ID: <b>E-102-40</b>	Batch ID: <b>74603</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217232</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

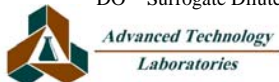
DRO	991.600	10	1000	0	99.2	60	158				
Surr: p-Terphenyl	77.820		80.00		97.3	63	152				

Sample ID: <b>119154-001GMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135423</b>						
Client ID: <b>E-102-40</b>	Batch ID: <b>74603</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217233</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1023.950	10	1000	0	102	60	158	991.6	3.21	20	
Surr: p-Terphenyl	82.730		80.00		103	63	152		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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>E110729LC1</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217925</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.638	1.0	5.000	0	92.8	70	130				
Surr: Bromofluorobenzene (FID)	113.655		100.0		114	51	161				

Sample ID: <b>E110729MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217928</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.945	1.0	5.000	0	98.9	41	146				
Surr: Bromofluorobenzene (FID)	122.661		100.0		123	51	161				

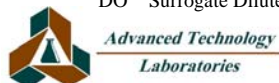
Sample ID: <b>E110729MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217929</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.814	1.0	5.000	0	96.3	41	146	4.945	2.68	20	
Surr: Bromofluorobenzene (FID)	113.921		100.0		114	51	161		0	0	

Sample ID: <b>E110729MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217930</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	72.508		100.0		72.5	51	161				

Sample ID: <b>119010-007AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217936</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	3.641	1.0	5.000	0	72.8	41	146				

**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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>119010-007AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217936</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

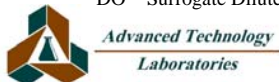
Surr: Bromofluorobenzene (FID)	125.081	100.0	125	51	161
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Sample ID: <b>119010-007AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135458</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS280</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/29/2011</b>	SeqNo: <b>2217937</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	4.698	1.0	5.000	0	94.0	41	146	3.641	25.4	20	R
Surr: Bromofluorobenzene (FID)	119.148	100.0	119	51	161	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   |  |



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**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_DM**

Sample ID: <b>MB-74588</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135420</b>						
Client ID: <b>PBW</b>	Batch ID: <b>74588</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217044</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	ND	0.20									
ORO	ND	0.20									
Surr: p-Terphenyl	0.056		0.08000		69.6	36	126				

Sample ID: <b>LCS-74588</b>	SampType: <b>LCS</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135420</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>74588</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217045</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.671	0.20	1.000	0	67.1	52	128				
Surr: p-Terphenyl	0.057		0.08000		71.0	36	126				

Sample ID: <b>MB-74588MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135420</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74588</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217046</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

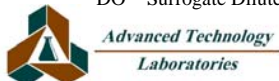
DRO	0.671	0.20	1.000	0	67.1	52	128				
Surr: p-Terphenyl	0.057		0.08000		71.6	36	126				

Sample ID: <b>MB-74588MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>7/28/2011</b>	RunNo: <b>135420</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74588</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217092</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.691	0.20	1.000	0	69.1	52	128	0.6706	2.97	20	
Surr: p-Terphenyl	0.060		0.08000		74.9	36	126		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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_G PRES**

Sample ID: <b>M110728LCS2</b>	SampType: <b>LCS</b>	TestCode: <b>8015_W_G P</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>135428</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>M11VW148</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217340</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.031	0.20	1.000	0	103	70	130				
Surr: Bromofluorobenzene (FID)	91.306		100.0		91.3	70	130				

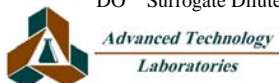
Sample ID: <b>M110728MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_W_G P</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>135428</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>M11VW148</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217343</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.042	0.20	1.000	0	104	70	130				
Surr: Bromofluorobenzene (FID)	90.647		100.0		90.6	70	130				

Sample ID: <b>M110728MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_W_G P</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>135428</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>M11VW148</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217344</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.036	0.20	1.000	0	104	70	130	1.042	0.577	20	
Surr: Bromofluorobenzene (FID)	91.536		100.0		91.5	70	130		0	0	

Sample ID: <b>M110728MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_G P</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>135428</b>						
Client ID: <b>PBW</b>	Batch ID: <b>M11VW148</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217345</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.20									
Surr: Bromofluorobenzene (FID)	88.770		100.0		88.8	70	130				

**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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

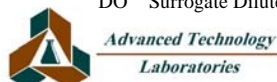
Sample ID: <b>K110728LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135403</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>K11VS199</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>7/28/2011</b>		SeqNo: <b>2217982</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	48.590	5.0	50.00	0	97.2	70	130					
Benzene	98.450	5.0	100.0	0	98.4	70	130					
Chlorobenzene	51.050	5.0	50.00	0	102	70	130					
MTBE	56.280	5.0	50.00	0	113	70	130					
Toluene	97.890	5.0	100.0	0	97.9	70	130					
Trichloroethene	49.170	5.0	50.00	0	98.3	70	130					
Surr: 1,2-Dichloroethane-d4	51.900		50.00		104	65	141					
Surr: 4-Bromofluorobenzene	44.650		50.00		89.3	57	134					
Surr: Dibromofluoromethane	49.790		50.00		99.6	70	128					
Surr: Toluene-d8	47.810		50.00		95.6	72	123					

Sample ID: <b>K110728MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135403</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS199</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>7/28/2011</b>		SeqNo: <b>2217983</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	49.990	5.0	50.00	0	100	70	130					
Benzene	99.340	5.0	100.0	0	99.3	70	130					
Chlorobenzene	52.560	5.0	50.00	0	105	70	130					
MTBE	57.470	5.0	50.00	0	115	70	130					
Toluene	98.850	5.0	100.0	0	98.8	70	130					
Trichloroethene	50.430	5.0	50.00	0	101	70	130					
Surr: 1,2-Dichloroethane-d4	52.550		50.00		105	65	141					
Surr: 4-Bromofluorobenzene	45.600		50.00		91.2	57	134					
Surr: Dibromofluoromethane	50.810		50.00		102	70	128					
Surr: Toluene-d8	47.710		50.00		95.4	72	123					

Sample ID: <b>K110728MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135403</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS199</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>7/28/2011</b>		SeqNo: <b>2217984</b>		
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           |
| 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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

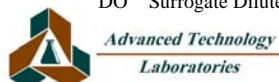
**TestCode: 8260\_S\_5035**

Sample ID: <b>K110728MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135403</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS199</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/28/2011</b>				SeqNo: <b>2217984</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.590	5.0	50.00	0	97.2	70	130	49.99	2.84	20	
Benzene	97.700	5.0	100.0	0	97.7	70	130	99.34	1.66	20	
Chlorobenzene	51.430	5.0	50.00	0	103	70	130	52.56	2.17	20	
MTBE	55.720	5.0	50.00	0	111	70	130	57.47	3.09	20	
Toluene	96.800	5.0	100.0	0	96.8	70	130	98.85	2.10	20	
Trichloroethene	48.840	5.0	50.00	0	97.7	70	130	50.43	3.20	20	
Surr: 1,2-Dichloroethane-d4	50.100		50.00		100	65	141		0	0	
Surr: 4-Bromofluorobenzene	44.910		50.00		89.8	57	134		0	0	
Surr: Dibromofluoromethane	49.770		50.00		99.5	70	128		0	0	
Surr: Toluene-d8	47.360		50.00		94.7	72	123		0	0	

Sample ID: <b>K110728MB1</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135403</b>	
Client ID: <b>PBS</b>		Batch ID: <b>K11VS199</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/28/2011</b>				SeqNo: <b>2217985</b>	
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:**

- |   |  |  |
|---|--|--|
| 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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110728MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135403</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS199</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217985</b>						
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:**

- |   |  |  |
|---|--|--|
| 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:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

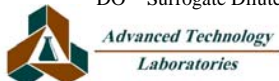
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110728MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135403</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS199</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2217985</b>						
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	53.270		50.00		107	65	141				
Surr: 4-Bromofluorobenzene	43.160		50.00		86.3	57	134				
Surr: Dibromofluoromethane	51.210		50.00		102	70	128				
Surr: Toluene-d8	47.560		50.00		95.1	72	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   |  |



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**CLIENT:** Mactec  
**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

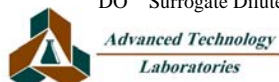
Sample ID: <b>Q110801CS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>135509</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>Q11VW142</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218975</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	16.890	0.50	20.00	0	84.4	70	130					
Benzene	38.700	0.50	40.00	0	96.8	70	130					
Chlorobenzene	20.100	0.50	20.00	0	101	70	130					
MTBE	21.320	0.50	20.00	0	107	70	130					
Toluene	40.520	0.50	40.00	0	101	70	130					
Trichloroethene	20.050	0.50	20.00	0	100	70	130					
Surr: 1,2-Dichloroethane-d4	17.690		25.00		70.8	70	130					
Surr: 4-Bromofluorobenzene	24.030		25.00		96.1	70	130					
Surr: Dibromofluoromethane	20.230		25.00		80.9	70	130					
Surr: Toluene-d8	22.470		25.00		89.9	70	130					

Sample ID: <b>Q110801MB3MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>135509</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW142</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218976</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	16.840	0.50	20.00	0	84.2	70	130					
Benzene	38.590	0.50	40.00	0	96.5	70	130					
Chlorobenzene	19.930	0.50	20.00	0	99.7	70	130					
MTBE	22.020	0.50	20.00	0	110	70	130					
Toluene	40.080	0.50	40.00	0	100	70	130					
Trichloroethene	20.220	0.50	20.00	0	101	70	130					
Surr: 1,2-Dichloroethane-d4	18.080		25.00		72.3	70	130					
Surr: 4-Bromofluorobenzene	24.460		25.00		97.8	70	130					
Surr: Dibromofluoromethane	20.500		25.00		82.0	70	130					
Surr: Toluene-d8	22.550		25.00		90.2	70	130					

Sample ID: <b>Q110801MB3MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>135509</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW142</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218977</b>				
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           |
| 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: 119154

Project: METRO WESTSIDE EXTENSION, 4953-10-1

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.150	0.50	20.00	0	85.8	70	130	16.84	1.82	20	
Benzene	39.160	0.50	40.00	0	97.9	70	130	38.59	1.47	20	
Chlorobenzene	19.760	0.50	20.00	0	98.8	70	130	19.93	0.857	20	
MTBE	21.440	0.50	20.00	0	107	70	130	22.02	2.67	20	
Toluene	40.360	0.50	40.00	0	101	70	130	40.08	0.696	20	
Trichloroethene	20.200	0.50	20.00	0	101	70	130	20.22	0.0990	20	
Surr: 1,2-Dichloroethane-d4	17.940		25.00		71.8	70	130		0	0	
Surr: 4-Bromofluorobenzene	24.000		25.00		96.0	70	130		0	0	
Surr: Dibromofluoromethane	20.510		25.00		82.0	70	130		0	0	
Surr: Toluene-d8	22.720		25.00		90.9	70	130		0	0	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

**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



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**CLIENT:** Mactec  
**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

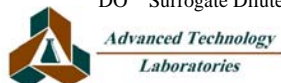
**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110801MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>135509</b>
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW142</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>	SeqNo: <b>2218978</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Di-isopropyl ether	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethyl tert-butyl ether	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									

**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   |  |



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**CLIENT:** Mactec  
**Work Order:** 119154  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

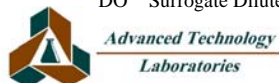
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110801MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>135509</b>						
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW142</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>8/1/2011</b>	SeqNo: <b>2218978</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
Tert-amyl methyl ether	ND	0.50									
Tert-Butanol	ND	10									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	19.160		25.00		76.6	70	130				
Surr: 4-Bromofluorobenzene	24.670		25.00		98.7	70	130				
Surr: Dibromofluoromethane	22.100		25.00		88.4	70	130				
Surr: Toluene-d8	23.170		25.00		92.7	70	130				

**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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July 01, 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.: 118620

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on June 23, 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.



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**CLIENT:** Mactec  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1  
**Lab Order:** 118620

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**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 8021B

Samples 118658-009AMS and 118658-009AMSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Sample 118658-009AMSD, RPD for Matrix Spike Duplicate (MSD) is outside criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-40
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:00:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-001A		

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

**EPA 8260B**

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>		
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1-Dichloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1-Dichloroethene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,1-Dichloropropene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2-Dibromo-3-chloropropane	ND	7.3	µg/Kg	1	6/27/2011 09:20 PM
1,2-Dibromoethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2-Dichloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,2-Dichloropropane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,3-Dichloropropane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
2,2-Dichloropropane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
2-Chlorotoluene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
4-Chlorotoluene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
4-Isopropyltoluene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Benzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Bromobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Bromodichloromethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Bromoform	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Bromomethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Carbon tetrachloride	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Chlorobenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Chloroethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Chloroform	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Chloromethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-40
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:00:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-001A		

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

**EPA 8260B**

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Di-isopropyl ether	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Dibromochloromethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Dibromomethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Ethylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Hexachlorobutadiene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Isopropylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
m,p-Xylene	ND	7.3	µg/Kg	1	6/27/2011 09:20 PM
Methylene chloride	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
MTBE	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
n-Butylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
n-Propylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Naphthalene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
o-Xylene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
sec-Butylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Styrene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Tert-Butanol	ND	73	µg/Kg	1	6/27/2011 09:20 PM
tert-Butylbenzene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Tetrachloroethene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Toluene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Trichloroethene	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Trichlorofluoromethane	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Vinyl chloride	ND	3.6	µg/Kg	1	6/27/2011 09:20 PM
Surr: 1,2-Dichloroethane-d4	104	65-141	%REC	1	6/27/2011 09:20 PM
Surr: 4-Bromofluorobenzene	92.2	57-134	%REC	1	6/27/2011 09:20 PM
Surr: Dibromofluoromethane	97.4	70-128	%REC	1	6/27/2011 09:20 PM
Surr: Toluene-d8	97.2	72-123	%REC	1	6/27/2011 09:20 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-40
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:00:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-001D		

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

**EPA 8015B(M)**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
GRO	ND	0.74	mg/Kg	1	6/28/2011 01:31 PM
Surr: Bromofluorobenzene (FID)	122	51-161	%REC	1	6/28/2011 01:31 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
Benzene	ND	3.7	µg/Kg	1	6/28/2011 01:31 PM
Ethylbenzene	ND	3.7	µg/Kg	1	6/28/2011 01:31 PM
m,p-Xylene	ND	7.4	µg/Kg	1	6/28/2011 01:31 PM
o-Xylene	ND	3.7	µg/Kg	1	6/28/2011 01:31 PM
Toluene	ND	3.7	µg/Kg	1	6/28/2011 01:31 PM
Surr: Bromofluorobenzene (PID)	98.3	33-163	%REC	1	6/28/2011 01:31 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-40
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:00:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-001G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC/FID</b>						
	<b>LUFT</b>	<b>EPA 8015B(M)</b>				
RunID: GC16_110628B	QC Batch: 73941				PrepDate: 6/28/2011	Analyst: CBR
DRO	ND	10		mg/Kg	1	6/28/2011 04:08 PM
Surr: p-Terphenyl	104	63-152		%REC	1	6/28/2011 04:08 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-50
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:20:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-002A		

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

### EPA 8260B

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>
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1,1,1,2-Tetrachloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1,1-Trichloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1,2,2-Tetrachloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1,2-Trichloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1-Dichloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1-Dichloroethene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,1-Dichloropropene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2,3-Trichlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2,3-Trichloropropane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2,4-Trichlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2,4-Trimethylbenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2-Dibromo-3-chloropropane	ND	7.3		µg/Kg	1	6/27/2011 09:37 PM
1,2-Dibromoethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2-Dichlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2-Dichloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,2-Dichloropropane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,3,5-Trimethylbenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,3-Dichlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,3-Dichloropropane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
1,4-Dichlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
2,2-Dichloropropane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
2-Chlorotoluene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
4-Chlorotoluene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
4-Isopropyltoluene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Benzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Bromobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Bromodichloromethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Bromoform	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Bromomethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Carbon tetrachloride	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Chlorobenzene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Chloroethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Chloroform	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
Chloromethane	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM
cis-1,2-Dichloroethene	ND	3.7		µg/Kg	1	6/27/2011 09:37 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-50
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 11:20:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118620-002A	

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

**EPA 8260B**

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Dibromochloromethane	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Dibromomethane	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Dichlorodifluoromethane	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Ethylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Hexachlorobutadiene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Isopropylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
m,p-Xylene	ND	7.3	µg/Kg	1	6/27/2011 09:37 PM
Methylene chloride	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
MTBE	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
n-Butylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
n-Propylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Naphthalene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
o-Xylene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
sec-Butylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Styrene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
tert-Butylbenzene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Tetrachloroethene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Toluene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
trans-1,2-Dichloroethene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Trichloroethene	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Trichlorofluoromethane	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Vinyl chloride	ND	3.7	µg/Kg	1	6/27/2011 09:37 PM
Surr: 1,2-Dichloroethane-d4	102	65-141	%REC	1	6/27/2011 09:37 PM
Surr: 4-Bromofluorobenzene	90.9	57-134	%REC	1	6/27/2011 09:37 PM
Surr: Dibromofluoromethane	96.2	70-128	%REC	1	6/27/2011 09:37 PM
Surr: Toluene-d8	92.1	72-123	%REC	1	6/27/2011 09:37 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-50
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:20:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-002D		

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

**EPA 8015B(M)**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
GRO	ND	0.73	mg/Kg	1	6/28/2011 01:46 PM
Surr: Bromofluorobenzene (FID)	117	51-161	%REC	1	6/28/2011 01:46 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
Benzene	8.7	3.6	µg/Kg	1	6/28/2011 01:46 PM
Ethylbenzene	ND	3.6	µg/Kg	1	6/28/2011 01:46 PM
m,p-Xylene	ND	7.3	µg/Kg	1	6/28/2011 01:46 PM
o-Xylene	ND	3.6	µg/Kg	1	6/28/2011 01:46 PM
Toluene	ND	3.6	µg/Kg	1	6/28/2011 01:46 PM
Surr: Bromofluorobenzene (PID)	95.2	33-163	%REC	1	6/28/2011 01:46 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-50
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 11:20:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118620-002G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110629A	QC Batch: 73935			PrepDate: 6/28/2011	Analyst: IL
Antimony	ND	2.0		mg/Kg	1 6/29/2011 10:29 AM
Arsenic	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Barium	34	1.0		mg/Kg	1 6/29/2011 10:29 AM
Beryllium	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Cadmium	1.3	1.0		mg/Kg	1 6/29/2011 10:29 AM
Chromium	15	1.0		mg/Kg	1 6/29/2011 10:29 AM
Cobalt	6.8	1.0		mg/Kg	1 6/29/2011 10:29 AM
Copper	12	2.0		mg/Kg	1 6/29/2011 10:29 AM
Lead	1.7	1.0		mg/Kg	1 6/29/2011 10:29 AM
Molybdenum	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Nickel	17	1.0		mg/Kg	1 6/29/2011 10:29 AM
Selenium	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Silver	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Thallium	ND	1.0		mg/Kg	1 6/29/2011 10:29 AM
Vanadium	20	1.0		mg/Kg	1 6/29/2011 10:29 AM
Zinc	28	1.0		mg/Kg	1 6/29/2011 10:29 AM

**DIESEL RANGE ORGANICS BY GC/FID**

**LUFT**

**EPA 8015B(M)**

RunID: GC16_110628B	QC Batch: 73941			PrepDate: 6/28/2011	Analyst: CBR
DRO	ND	10		mg/Kg	1 6/28/2011 04:18 PM
Surr: p-Terphenyl	107	63-152		%REC	1 6/28/2011 04:18 PM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110629A	QC Batch: 73932			PrepDate: 6/28/2011	Analyst: VV
Mercury	ND	0.10		mg/Kg	1 6/29/2011 11:09 AM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-55
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 11:35:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118620-003A	

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

**EPA 8260B**

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>
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1,1,1,2-Tetrachloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1,1-Trichloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1,2,2-Tetrachloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1,2-Trichloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1-Dichloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1-Dichloroethene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,1-Dichloropropene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2,3-Trichlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2,3-Trichloropropane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2,4-Trichlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2,4-Trimethylbenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2-Dibromo-3-chloropropane	ND	7.0		µg/Kg	1	6/27/2011 09:55 PM
1,2-Dibromoethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2-Dichlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2-Dichloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,2-Dichloropropane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,3,5-Trimethylbenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,3-Dichlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,3-Dichloropropane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
1,4-Dichlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
2,2-Dichloropropane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
2-Chlorotoluene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
4-Chlorotoluene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
4-Isopropyltoluene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Benzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Bromobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Bromodichloromethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Bromoform	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Bromomethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Carbon tetrachloride	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Chlorobenzene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Chloroethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Chloroform	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
Chloromethane	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM
cis-1,2-Dichloroethene	ND	3.5		µg/Kg	1	6/27/2011 09:55 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-55
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 11:35:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118620-003A	

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

**EPA 8260B**

RunID: MS4_110627A	QC Batch: K11VS180	PrepDate: 6/23/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Dibromochloromethane	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Dibromomethane	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Dichlorodifluoromethane	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Ethylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Hexachlorobutadiene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Isopropylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
m,p-Xylene	ND	7.0	µg/Kg	1	6/27/2011 09:55 PM
Methylene chloride	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
MTBE	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
n-Butylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
n-Propylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Naphthalene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
o-Xylene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
sec-Butylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Styrene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
tert-Butylbenzene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Tetrachloroethene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Toluene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
trans-1,2-Dichloroethene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Trichloroethene	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Trichlorofluoromethane	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Vinyl chloride	ND	3.5	µg/Kg	1	6/27/2011 09:55 PM
Surr: 1,2-Dichloroethane-d4	108	65-141	%REC	1	6/27/2011 09:55 PM
Surr: 4-Bromofluorobenzene	95.4	57-134	%REC	1	6/27/2011 09:55 PM
Surr: Dibromofluoromethane	102	70-128	%REC	1	6/27/2011 09:55 PM
Surr: Toluene-d8	97.8	72-123	%REC	1	6/27/2011 09:55 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-55
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:35:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-003D		

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

**EPA 8015B(M)**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
GRO	ND	0.71	mg/Kg	1	6/28/2011 02:02 PM
Surr: Bromofluorobenzene (FID)	121	51-161	%REC	1	6/28/2011 02:02 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110628A	QC Batch: E11VS239	PrepDate: 6/22/2011	Analyst: TP		
Benzene	ND	3.6	µg/Kg	1	6/28/2011 02:02 PM
Ethylbenzene	ND	3.6	µg/Kg	1	6/28/2011 02:02 PM
m,p-Xylene	ND	7.1	µg/Kg	1	6/28/2011 02:02 PM
o-Xylene	ND	3.6	µg/Kg	1	6/28/2011 02:02 PM
Toluene	ND	3.6	µg/Kg	1	6/28/2011 02:02 PM
Surr: Bromofluorobenzene (PID)	97.7	33-163	%REC	1	6/28/2011 02:02 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-55
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 11:35:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118620-003G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC/FID</b>						
	<b>LUFT</b>	<b>EPA 8015B(M)</b>				
RunID: GC16_110628B	QC Batch: 73941				PrepDate: 6/28/2011	Analyst: CBR
DRO	ND	10		mg/Kg	1	6/28/2011 04:28 PM
Surr: p-Terphenyl	114	63-152		%REC	1	6/28/2011 04:28 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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-50
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 12:35:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 118620-004A	

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

**EPA 8260B**

RunID: MS2_110629A	QC Batch: Q11VW122	PrepDate:	Analyst: SLL		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1-Dichloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1-Dichloroethene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,1-Dichloropropene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2-Dibromoethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2-Dichloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,2-Dichloropropane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,3-Dichloropropane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
2,2-Dichloropropane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
2-Chlorotoluene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
4-Chlorotoluene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
4-Isopropyltoluene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Benzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Bromobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Bromodichloromethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Bromoform	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Bromomethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Carbon tetrachloride	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Chlorobenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Chloroethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Chloroform	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Chloromethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	6/29/2011 10:26 AM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-50
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 12:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	118620-004A		

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

**EPA 8260B**

RunID: MS2_110629A	QC Batch: Q11VW122	PrepDate:	Analyst: SLL		
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Di-isopropyl ether	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Dibromochloromethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Dibromomethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Dichlorodifluoromethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Ethyl tert-butyl ether	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Ethylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Hexachlorobutadiene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Isopropylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
m,p-Xylene	ND	1.0	µg/L	1	6/29/2011 10:26 AM
Methylene chloride	ND	1.0	µg/L	1	6/29/2011 10:26 AM
MTBE	ND	0.50	µg/L	1	6/29/2011 10:26 AM
n-Butylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
n-Propylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Naphthalene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
o-Xylene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
sec-Butylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Styrene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Tert-amyl methyl ether	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Tert-Butanol	ND	10	µg/L	1	6/29/2011 10:26 AM
tert-Butylbenzene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Tetrachloroethene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Toluene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Trichloroethene	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Trichlorofluoromethane	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Vinyl chloride	ND	0.50	µg/L	1	6/29/2011 10:26 AM
Surr: 1,2-Dichloroethane-d4	90.9	70-130	%REC	1	6/29/2011 10:26 AM
Surr: 4-Bromofluorobenzene	94.3	70-130	%REC	1	6/29/2011 10:26 AM
Surr: Dibromofluoromethane	91.2	70-130	%REC	1	6/29/2011 10:26 AM
Surr: Toluene-d8	89.4	70-130	%REC	1	6/29/2011 10:26 AM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-103-50
<b>Lab Order:</b> 118620	<b>Collection Date:</b> 6/22/2011 12:35:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 118620-004B	

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

**EPA 8015B(M)**

RunID: GC19_110629A	QC Batch: M11VW129	PrepDate:	Analyst: <b>TP</b>		
GRO	ND	0.20	mg/L	1	6/29/2011 09:18 PM
Surr: Bromofluorobenzene (FID)	95.0	70-130	%REC	1	6/29/2011 09:18 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC19_110629A	QC Batch: M11VW129	PrepDate:	Analyst: <b>TP</b>		
Benzene	ND	0.50	µg/L	1	6/29/2011 09:18 PM
Ethylbenzene	ND	0.50	µg/L	1	6/29/2011 09:18 PM
m,p-Xylene	ND	1.0	µg/L	1	6/29/2011 09:18 PM
o-Xylene	ND	0.50	µg/L	1	6/29/2011 09:18 PM
Toluene	ND	0.50	µg/L	1	6/29/2011 09:18 PM
Surr: Bromofluorobenzene (PID)	87.0	70-130	%REC	1	6/29/2011 09:18 PM

<b>Qualifiers:</b>	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: 01-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-103-50
<b>Lab Order:</b>	118620	<b>Collection Date:</b>	6/22/2011 12:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	118620-004C		

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

**EPA 3510C**

**EPA 8015B(M)**

RunID: GC16_110628A	QC Batch: 73912	PrepDate: 6/27/2011	Analyst: CBR
DRO	ND	0.20	mg/L
Surr: p-Terphenyl	98.5	36-126	%REC

<b>Qualifiers:</b>	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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

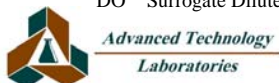
**TestCode: 6010\_S**

Sample ID: <b>MB-73935</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134499</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73935</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199100</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	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	0.212	1.0									

Sample ID: <b>LCS-73935</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134499</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73935</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199101</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.163	2.0	50.00	0	94.3	80	120				
Arsenic	47.469	1.0	50.00	0	94.9	80	120				
Barium	48.281	1.0	50.00	0	96.6	80	120				
Beryllium	47.321	1.0	50.00	0	94.6	80	120				
Cadmium	46.939	1.0	50.00	0	93.9	80	120				
Chromium	44.770	1.0	50.00	0	89.5	80	120				
Cobalt	48.562	1.0	50.00	0	97.1	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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

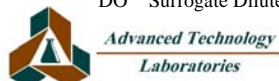
**TestCode: 6010\_S**

Sample ID: <b>LCS-73935</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/28/2011</b>		RunNo: <b>134499</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>73935</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2199101</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	48.530	2.0	50.00	0	97.1	80	120					
Lead	47.797	1.0	50.00	0	95.6	80	120					
Molybdenum	49.718	1.0	50.00	0	99.4	80	120					
Nickel	47.117	1.0	50.00	0	94.2	80	120					
Selenium	44.660	1.0	50.00	0	89.3	80	120					
Silver	47.861	1.0	50.00	0	95.7	80	120					
Thallium	45.663	1.0	50.00	0	91.3	80	120					
Vanadium	48.861	1.0	50.00	0	97.7	80	120					
Zinc	47.972	1.0	50.00	0.2116	95.5	80	120					

Sample ID: <b>118606-005A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/28/2011</b>		RunNo: <b>134499</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>73935</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2199103</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	85.126	2.0	125.0	0.9440	67.3	32	105					
Arsenic	105.631	1.0	125.0	1.583	83.2	49	106					
Barium	225.784	1.0	125.0	127.2	78.9	31	133					
Beryllium	104.889	1.0	125.0	0	83.9	56	106					
Cadmium	100.148	1.0	125.0	0.6001	79.6	51	103					
Chromium	133.015	1.0	125.0	37.03	76.8	45	114					
Cobalt	110.853	1.0	125.0	10.46	80.3	52	106					
Copper	129.634	2.0	125.0	18.50	88.9	54	125					
Lead	106.275	1.0	125.0	6.342	79.9	34	126					
Molybdenum	105.169	1.0	125.0	0	84.1	54	106					
Nickel	148.852	1.0	125.0	73.93	59.9	45	111					
Selenium	99.770	1.0	125.0	0	79.8	47	104					
Silver	109.012	1.0	125.0	0	87.2	56	112					
Thallium	94.677	1.0	125.0	0	75.7	46	101					
Vanadium	135.921	1.0	125.0	30.15	84.6	54	114					
Zinc	136.681	1.0	125.0	35.91	80.6	28	125					

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

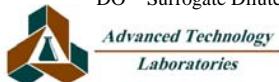
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>118606-005A-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>6/28/2011</b>		RunNo: <b>134499</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>73935</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2199104</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	82.156	2.0	125.0	0.9440	65.0	32	105	85.13	3.55	20	
Arsenic	104.421	1.0	125.0	1.583	82.3	49	106	105.6	1.15	20	
Barium	253.610	1.0	125.0	127.2	101	31	133	225.8	11.6	20	
Beryllium	105.409	1.0	125.0	0	84.3	56	106	104.9	0.495	20	
Cadmium	100.020	1.0	125.0	0.6001	79.5	51	103	100.1	0.127	20	
Chromium	137.258	1.0	125.0	37.03	80.2	45	114	133.0	3.14	20	
Cobalt	111.469	1.0	125.0	10.46	80.8	52	106	110.9	0.554	20	
Copper	131.544	2.0	125.0	18.50	90.4	54	125	129.6	1.46	20	
Lead	105.108	1.0	125.0	6.342	79.0	34	126	106.3	1.10	20	
Molybdenum	103.785	1.0	125.0	0	83.0	54	106	105.2	1.32	20	
Nickel	153.487	1.0	125.0	73.93	63.6	45	111	148.9	3.07	20	
Selenium	97.866	1.0	125.0	0	78.3	47	104	99.77	1.93	20	
Silver	109.474	1.0	125.0	0	87.6	56	112	109.0	0.423	20	
Thallium	94.136	1.0	125.0	0	75.3	46	101	94.68	0.573	20	
Vanadium	137.507	1.0	125.0	30.15	85.9	54	114	135.9	1.16	20	
Zinc	137.550	1.0	125.0	35.91	81.3	28	125	136.7	0.634	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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-73932</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134510</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73932</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199223</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	ND	0.10									
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Sample ID: <b>LCS-73932</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134510</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73932</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199224</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.796	0.10	0.8300	0	95.9	80	120				
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Sample ID: <b>118606-005A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134510</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73932</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199225</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

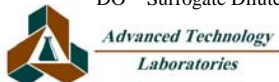
Mercury	0.891	0.10	0.8300	0.05640	101	70	130				
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Sample ID: <b>118606-005A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134510</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73932</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199226</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.857	0.10	0.8300	0.05640	96.5	70	130	0.8910	3.89	20	
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**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_S\_DSL H**

Sample ID: <b>MB-73941</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DSL</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134496</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73941</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198952</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	ND	10									
Surr: p-Terphenyl	101.280		80.00		127	63	152				

Sample ID: <b>LCS-73941</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DSL</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134496</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73941</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198953</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1077.800	10	1000	0	108	76	139				
Surr: p-Terphenyl	100.940		80.00		126	63	152				

Sample ID: <b>118666-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DSL</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134496</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73941</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198954</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

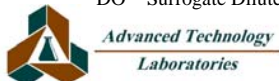
DRO	1344.440	10	1000	291.7	105	60	158				
Surr: p-Terphenyl	83.500		80.00		104	63	152				

Sample ID: <b>118666-002AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DSL</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/28/2011</b>	RunNo: <b>134496</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73941</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198955</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1429.670	10	1000	291.7	114	60	158	1344	6.14	20	
Surr: p-Terphenyl	98.830		80.00		124	63	152		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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>E110628LC1</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198994</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.302	1.0	5.000	0	106	70	130				
Surr: Bromofluorobenzene (FID)	121.052		100.0		121	51	161				

Sample ID: <b>E110628MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198995</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.224	1.0	5.000	0	104	41	146				
Surr: Bromofluorobenzene (FID)	119.011		100.0		119	51	161				

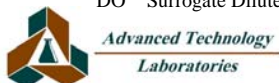
Sample ID: <b>E110628MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198996</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.292	1.0	5.000	0	106	41	146	5.224	1.29	20	
Surr: Bromofluorobenzene (FID)	118.146		100.0		118	51	161		0	0	

Sample ID: <b>E110628MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198997</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	101.699		100.0		102	51	161				

Sample ID: <b>118658-009AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199010</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.005	1.0	5.000	0	80.1	41	146				

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

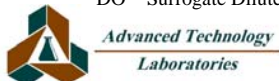
**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>118658-009AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199010</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	129.992		100.0		130	51	161				

Sample ID: <b>118658-009AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199011</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.839	1.0	5.000	0	96.8	41	146	4.005	18.9	20	
Surr: Bromofluorobenzene (FID)	129.251		100.0		129	51	161		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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_DSL H**

Sample ID: <b>MB-73912</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_DSL</b>	Units: <b>mg/L</b>	Prep Date: <b>6/27/2011</b>	RunNo: <b>134463</b>						
Client ID: <b>PBW</b>	Batch ID: <b>73912</b>	TestNo: <b>EPA 8015B(M EPA 3510C)</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198409</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	ND	0.20									
Surr: p-Terphenyl	0.050		0.08000		62.4	36	126				

Sample ID: <b>LCS-73912</b>	SampType: <b>LCS</b>	TestCode: <b>8015_W_DSL</b>	Units: <b>mg/L</b>	Prep Date: <b>6/27/2011</b>	RunNo: <b>134463</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>73912</b>	TestNo: <b>EPA 8015B(M EPA 3510C)</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198410</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.630	0.20	1.000	0	63.0	52	128				
Surr: p-Terphenyl	0.063		0.08000		79.2	36	126				

Sample ID: <b>MB-73912MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_W_DSL</b>	Units: <b>mg/L</b>	Prep Date: <b>6/27/2011</b>	RunNo: <b>134463</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73912</b>	TestNo: <b>EPA 8015B(M EPA 3510C)</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198411</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

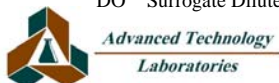
DRO	0.663	0.20	1.000	0	66.3	52	128				
Surr: p-Terphenyl	0.060		0.08000		75.4	36	126				

Sample ID: <b>MB-73912MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_W_DSL</b>	Units: <b>mg/L</b>	Prep Date: <b>6/27/2011</b>	RunNo: <b>134463</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73912</b>	TestNo: <b>EPA 8015B(M EPA 3510C)</b>		Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2198412</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.693	0.20	1.000	0	69.3	52	128	0.6628	4.50	20	
Surr: p-Terphenyl	0.064		0.08000		79.7	36	126		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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_G PRES**

Sample ID: <b>M110629LC1</b>		SampType: <b>LCS</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200400</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	0.844	0.20	1.000	0	84.4	70	130					
Surr: Bromofluorobenzene (FID)	97.396		100.0		97.4	70	130					

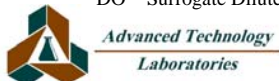
Sample ID: <b>M110629MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200401</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	0.911	0.20	1.000	0	91.1	70	130					
Surr: Bromofluorobenzene (FID)	97.334		100.0		97.3	70	130					

Sample ID: <b>M110629MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200402</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	0.896	0.20	1.000	0	89.6	70	130	0.9110	1.66	20		
Surr: Bromofluorobenzene (FID)	97.774		100.0		97.8	70	130		0	0		

Sample ID: <b>M110629MB1MS</b>		SampType: <b>MBLK</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>PBW</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200403</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	ND	0.20										
Surr: Bromofluorobenzene (FID)	94.717		100.0		94.7	70	130					

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8021\_S\_B 5035P**

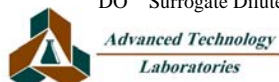
Sample ID: <b>E110628LC2</b>	SampType: <b>LCS</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199054</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	94.337	5.0	100.0	0	94.3	70	130				
Ethylbenzene	96.658	5.0	100.0	0	96.7	70	130				
m,p-Xylene	195.503	10	200.0	0	97.8	70	130				
o-Xylene	100.010	5.0	100.0	0	100	70	130				
Toluene	96.928	5.0	100.0	0	96.9	70	130				
Surr: Bromofluorobenzene (PID)	90.946		100.0		90.9	33	163				

Sample ID: <b>E110628LC2</b>	SampType: <b>LCSD</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199055</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	91.832	5.0	100.0	0	91.8	70	130	94.34	2.69	20	
Ethylbenzene	94.472	5.0	100.0	0	94.5	70	130	96.66	2.29	20	
m,p-Xylene	190.858	10	200.0	0	95.4	70	130	195.5	2.40	20	
o-Xylene	97.445	5.0	100.0	0	97.4	70	130	100.0	2.60	20	
Toluene	94.693	5.0	100.0	0	94.7	70	130	96.93	2.33	20	
Surr: Bromofluorobenzene (PID)	89.120		100.0		89.1	33	163		0	0	

Sample ID: <b>E110628MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134491</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS239</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>6/28/2011</b>	SeqNo: <b>2199058</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0									
Ethylbenzene	ND	5.0									
m,p-Xylene	ND	10									
o-Xylene	ND	5.0									
Toluene	ND	5.0									
Surr: Bromofluorobenzene (PID)	82.520		100.0		82.5	33	163				

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

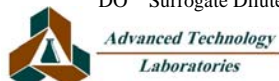
**TestCode: 8021\_S\_B 5035P**

Sample ID: <b>118658-009AMS</b>		SampType: <b>MS</b>		TestCode: <b>8021_S_B 50</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134491</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>E11VS239</b>		TestNo: <b>EPA 8021B</b>				Analysis Date: <b>6/28/2011</b>		SeqNo: <b>2199071</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	26.567	5.0	22.15	0	120	44	115				S	
Ethylbenzene	38.951	5.0	42.30	0	92.1	49	95					
m,p-Xylene	132.828	10	180.2	0	73.7	55	98					
o-Xylene	50.760	5.0	64.80	0	78.3	50	93					
Toluene	130.255	5.0	172.6	0	75.4	46	113					
Surr: Bromofluorobenzene (PID)	105.279		100.0		105	33	163					

Sample ID: <b>118658-009AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8021_S_B 50</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134491</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>E11VS239</b>		TestNo: <b>EPA 8021B</b>				Analysis Date: <b>6/28/2011</b>		SeqNo: <b>2199072</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	31.500	5.0	22.15	0	142	44	115	26.57	17.0	20	S	
Ethylbenzene	47.924	5.0	42.30	0	113	49	95	38.95	20.7	20	SR	
m,p-Xylene	163.790	10	180.2	0	90.9	55	98	132.8	20.9	20	R	
o-Xylene	63.270	5.0	64.80	0	97.6	50	93	50.76	21.9	20	SR	
Toluene	155.697	5.0	172.6	0	90.2	46	113	130.3	17.8	20		
Surr: Bromofluorobenzene (PID)	105.250		100.0		105	33	163		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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8021\_WP\_BTEX**

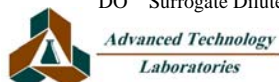
Sample ID: <b>M110629LC2</b>		SampType: <b>LCS</b>		TestCode: <b>8021_WP_BT</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8021B</b>				Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200443</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	93.838	0.50	100.0	0	93.8	70	130					
Toluene	95.667	0.50	100.0	0	95.7	70	130					
Ethylbenzene	93.767	0.50	100.0	0	93.8	70	130					
m,p-Xylene	188.496	1.0	200.0	0	94.2	70	130					
o-Xylene	97.213	0.50	100.0	0	97.2	70	130					
Surr: Bromofluorobenzene (PID)	89.209		100.0		89.2	70	130					

Sample ID: <b>M110629LC2</b>		SampType: <b>LCS</b>		TestCode: <b>8021_WP_BT</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8021B</b>				Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200444</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	94.306	0.50	100.0	0	94.3	70	130	93.84	0.497	20		
Toluene	95.388	0.50	100.0	0	95.4	70	130	95.67	0.292	20		
Ethylbenzene	94.285	0.50	100.0	0	94.3	70	130	93.77	0.551	20		
m,p-Xylene	189.514	1.0	200.0	0	94.8	70	130	188.5	0.539	20		
o-Xylene	97.668	0.50	100.0	0	97.7	70	130	97.21	0.467	20		
Surr: Bromofluorobenzene (PID)	89.182		100.0		89.2	70	130		0	0		

Sample ID: <b>M110629MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8021_WP_BT</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134575</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>M11VW129</b>		TestNo: <b>EPA 8021B</b>				Analysis Date: <b>6/29/2011</b>		SeqNo: <b>2200445</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	6.945	0.50	6.400	0	109	70	130					
Toluene	37.036	0.50	33.85	0	109	70	130					
Ethylbenzene	11.466	0.50	10.95	0	105	70	130					
m,p-Xylene	40.454	1.0	42.40	0	95.4	70	130					
o-Xylene	15.910	0.50	13.35	0	119	70	130					
Surr: Bromofluorobenzene (PID)	89.764		100.0		89.8	70	130					

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

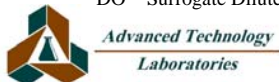
**TestCode: 8021\_WP\_BTEX**

Sample ID: <b>M110629MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8021_WP_BT</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134575</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>M11VW129</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>6/29/2011</b>			SeqNo: <b>2200446</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6.656	0.50	6.400	0	104	70	130	6.945	4.25	20	
Toluene	36.430	0.50	33.85	0	108	70	130	37.04	1.65	20	
Ethylbenzene	11.098	0.50	10.95	0	101	70	130	11.47	3.26	20	
m,p-Xylene	39.600	1.0	42.40	0	93.4	70	130	40.45	2.13	20	
o-Xylene	15.476	0.50	13.35	0	116	70	130	15.91	2.77	20	
Surr: Bromofluorobenzene (PID)	88.949		100.0		88.9	70	130		0	0	

Sample ID: <b>M110629MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8021_WP_BT</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134575</b>						
Client ID: <b>PBW</b>	Batch ID: <b>M11VW129</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>6/29/2011</b>			SeqNo: <b>2200447</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Surr: Bromofluorobenzene (PID)	87.272		100.0		87.3	70	130				

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

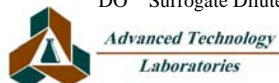
Sample ID: <b>K110627LCS2</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>6/27/2011</b>		SeqNo: <b>2198426</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	48.260	5.0	50.00	0	96.5	70	130					
Benzene	105.010	5.0	100.0	0	105	70	130					
Chlorobenzene	54.670	5.0	50.00	0	109	70	130					
MTBE	54.440	5.0	50.00	0	109	70	130					
Toluene	108.490	5.0	100.0	0	108	70	130					
Trichloroethene	51.610	5.0	50.00	0	103	70	130					
Surr: 1,2-Dichloroethane-d4	46.850		50.00		93.7	65	141					
Surr: 4-Bromofluorobenzene	46.920		50.00		93.8	57	134					
Surr: Dibromofluoromethane	45.450		50.00		90.9	70	128					
Surr: Toluene-d8	48.250		50.00		96.5	72	123					

Sample ID: <b>118639-001AMS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>6/27/2011</b>		SeqNo: <b>2198427</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	45.550	5.0	50.00	0	91.1	70	130					
Benzene	98.910	5.0	100.0	0	98.9	70	130					
Chlorobenzene	52.100	5.0	50.00	0	104	70	130					
MTBE	49.320	5.0	50.00	0	98.6	70	130					
Toluene	101.360	5.0	100.0	0	101	70	130					
Trichloroethene	48.990	5.0	50.00	0	98.0	70	130					
Surr: 1,2-Dichloroethane-d4	43.660		50.00		87.3	65	141					
Surr: 4-Bromofluorobenzene	45.880		50.00		91.8	57	134					
Surr: Dibromofluoromethane	44.400		50.00		88.8	70	128					
Surr: Toluene-d8	46.060		50.00		92.1	72	123					

Sample ID: <b>118639-001AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>6/27/2011</b>		SeqNo: <b>2198428</b>		
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           |
| 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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

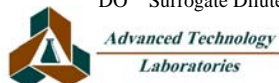
Sample ID: <b>118639-001AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>				SeqNo: <b>2198428</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	45.780	5.0	50.00	0	91.6	70	130	45.55	0.504	20	
Benzene	99.710	5.0	100.0	0	99.7	70	130	98.91	0.806	20	
Chlorobenzene	51.380	5.0	50.00	0	103	70	130	52.10	1.39	20	
MTBE	50.020	5.0	50.00	0	100	70	130	49.32	1.41	20	
Toluene	102.620	5.0	100.0	0	103	70	130	101.4	1.24	20	
Trichloroethene	50.480	5.0	50.00	0	101	70	130	48.99	3.00	20	
Surr: 1,2-Dichloroethane-d4	42.330		50.00		84.7	65	141		0	0	
Surr: 4-Bromofluorobenzene	46.670		50.00		93.3	57	134		0	0	
Surr: Dibromofluoromethane	44.220		50.00		88.4	70	128		0	0	
Surr: Toluene-d8	45.590		50.00		91.2	72	123		0	0	

Sample ID: <b>K110627MB4MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>				SeqNo: <b>2198429</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	40.370	5.0	50.00	0	80.7	70	130				
Benzene	83.190	5.0	100.0	0	83.2	70	130				
Chlorobenzene	40.750	5.0	50.00	0	81.5	70	130				
MTBE	41.650	5.0	50.00	0	83.3	70	130				
Toluene	83.950	5.0	100.0	0	84.0	70	130				
Trichloroethene	41.570	5.0	50.00	0	83.1	70	130				
Surr: 1,2-Dichloroethane-d4	43.760		50.00		87.5	65	141				
Surr: 4-Bromofluorobenzene	45.600		50.00		91.2	57	134				
Surr: Dibromofluoromethane	44.050		50.00		88.1	70	128				
Surr: Toluene-d8	43.840		50.00		87.7	72	123				

Sample ID: <b>K110627MB4MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>				SeqNo: <b>2198430</b>	
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           |
| 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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

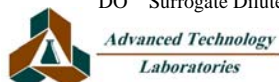
**TestCode: 8260\_S\_5035**

Sample ID: <b>K110627MB4MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>				SeqNo: <b>2198430</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	40.210	5.0	50.00	0	80.4	70	130	40.37	0.397	20	
Benzene	84.010	5.0	100.0	0	84.0	70	130	83.19	0.981	20	
Chlorobenzene	41.900	5.0	50.00	0	83.8	70	130	40.75	2.78	20	
MTBE	41.930	5.0	50.00	0	83.9	70	130	41.65	0.670	20	
Toluene	85.360	5.0	100.0	0	85.4	70	130	83.95	1.67	20	
Trichloroethene	40.850	5.0	50.00	0	81.7	70	130	41.57	1.75	20	
Surr: 1,2-Dichloroethane-d4	45.120		50.00		90.2	65	141		0	0	
Surr: 4-Bromofluorobenzene	49.640		50.00		99.3	57	134		0	0	
Surr: Dibromofluoromethane	46.620		50.00		93.2	70	128		0	0	
Surr: Toluene-d8	47.110		50.00		94.2	72	123		0	0	

Sample ID: <b>K110627MB4</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134466</b>	
Client ID: <b>PBS</b>		Batch ID: <b>K11VS180</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>				SeqNo: <b>2198431</b>	
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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| 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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110627MB4</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134466</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS180</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/27/2011</b>	SeqNo: <b>2198431</b>						
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:**

- |   |  |  |
|---|--|--|
| 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   |  |



*Advanced Technology  
Laboratories*

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

**CLIENT:** Mactec  
**Work Order:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110627MB4</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134466</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS180</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>6/27/2011</b>	SeqNo: <b>2198431</b>							
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	45.270		50.00		90.5	65	141				
Surr: 4-Bromofluorobenzene	44.110		50.00		88.2	57	134				
Surr: Dibromofluoromethane	44.680		50.00		89.4	70	128				
Surr: Toluene-d8	44.550		50.00		89.1	72	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   |  |



*Advanced Technology  
Laboratories*

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



**CLIENT:** Mactec  
**Work Order:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

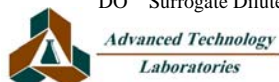
Sample ID: <b>Q110629LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134523</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>Q11VW122</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>				SeqNo: <b>2199399</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.590	0.50	20.00	0	98.0	70	130				
Benzene	38.510	0.50	40.00	0	96.3	70	130				
Chlorobenzene	20.000	0.50	20.00	0	100	70	130				
MTBE	18.570	0.50	20.00	0	92.8	70	130				
Toluene	40.110	0.50	40.00	0	100	70	130				
Trichloroethene	19.600	0.50	20.00	0	98.0	70	130				
Surr: 1,2-Dichloroethane-d4	19.670		25.00		78.7	70	130				
Surr: 4-Bromofluorobenzene	23.230		25.00		92.9	70	130				
Surr: Dibromofluoromethane	20.620		25.00		82.5	70	130				
Surr: Toluene-d8	22.240		25.00		89.0	70	130				

Sample ID: <b>Q110629MB3MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134523</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW122</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>				SeqNo: <b>2199400</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20.530	0.50	20.00	0	103	70	130				
Benzene	39.170	0.50	40.00	0	97.9	70	130				
Chlorobenzene	20.330	0.50	20.00	0	102	70	130				
MTBE	18.080	0.50	20.00	0	90.4	70	130				
Toluene	41.070	0.50	40.00	0	103	70	130				
Trichloroethene	20.570	0.50	20.00	0	103	70	130				
Surr: 1,2-Dichloroethane-d4	19.040		25.00		76.2	70	130				
Surr: 4-Bromofluorobenzene	22.920		25.00		91.7	70	130				
Surr: Dibromofluoromethane	19.950		25.00		79.8	70	130				
Surr: Toluene-d8	22.110		25.00		88.4	70	130				

Sample ID: <b>Q110629MB3MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134523</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>Q11VW122</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>				SeqNo: <b>2199401</b>	
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           |
| 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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

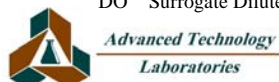
**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110629MB3MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134523</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>Q11VW122</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>				SeqNo: <b>2199401</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.950	0.50	20.00	0	99.8	70	130	20.53	2.87	20	
Benzene	40.130	0.50	40.00	0	100	70	130	39.17	2.42	20	
Chlorobenzene	21.000	0.50	20.00	0	105	70	130	20.33	3.24	20	
MTBE	18.990	0.50	20.00	0	95.0	70	130	18.08	4.91	20	
Toluene	41.690	0.50	40.00	0	104	70	130	41.07	1.50	20	
Trichloroethene	20.780	0.50	20.00	0	104	70	130	20.57	1.02	20	
Surr: 1,2-Dichloroethane-d4	19.670		25.00		78.7	70	130		0	0	
Surr: 4-Bromofluorobenzene	24.390		25.00		97.6	70	130		0	0	
Surr: Dibromofluoromethane	21.330		25.00		85.3	70	130		0	0	
Surr: Toluene-d8	23.390		25.00		93.6	70	130		0	0	

Sample ID: <b>Q110629MB3</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>134523</b>	
Client ID: <b>PBW</b>		Batch ID: <b>Q11VW122</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>				SeqNo: <b>2199402</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

**Qualifiers:**

- |   |  |  |
|---|--|--|
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| DO Surrogate Diluted Out                          | Calculations are based on raw values   |  |



**CLIENT:** Mactec  
**Work Order:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110629MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134523</b>
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW122</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199402</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Di-isopropyl ether	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethyl tert-butyl ether	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									

**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:** 118620  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>Q110629MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>134523</b>						
Client ID: <b>PBW</b>	Batch ID: <b>Q11VW122</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/29/2011</b>	SeqNo: <b>2199402</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
Tert-amyl methyl ether	ND	0.50									
Tert-Butanol	ND	10									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	21.570		25.00		86.3	70	130				
Surr: 4-Bromofluorobenzene	24.060		25.00		96.2	70	130				
Surr: Dibromofluoromethane	22.840		25.00		91.4	70	130				
Surr: Toluene-d8	22.450		25.00		89.8	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

Quote #: 201106374  
 Logged By: \_\_\_\_\_ Date: \_\_\_\_\_  
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

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

Client: MACTEC  
 Attn: MATT FRAYCHINEAUD  
 Address: 5628 E. SLAVSON AVE State: CA Zip Code: 90040  
 City: LOS ANGELES

Project Name: METRO WESTSIDE EXTENSION  
 Relinquished by: DUAN D. SANDER Date: 6-22-11  
 Relinquished by: MATT FRAYCHINEAUD Date: 6/22/11  
 Relinquished by: MATT FRAYCHINEAUD Date: 6/22/11  
 I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: MATT FRAYCHINEAUD Date: 6/22/11  
 Signature: [Signature]

Project #: 4953-10-1561  
 Received by: MATT FRAYCHINEAUD Date: 6/22/11 Time: 4:50P  
 Received by: CAUCH MENDOZA Date: 6/22/11 Time: 9:30A  
 Received by: [Signature] Date: 6/23/11 Time: 13:39  
 Special Instructions/Comments: [Signature]

Send Report To: \_\_\_\_\_ Attn: \_\_\_\_\_  
 Co: \_\_\_\_\_  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

**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)

LAB USE ONLY:	Sample Description	Date	Time
118620-1	E-103-40	6/22	11:00
↓	E-103-50	6/22	11:20
↓	E-103-55	6/22	11:35
↓	E-103-50	6/22	12:35

**Container(s)**  
 Container # Type  
 E 8 V T  
 E 8 V T  
 E 8 V T  
 E 6 V J

**Q A / Q C**  
 RTNE   
 CT   
 Legal   
 SWRCB   
 Logcode   
 OTHER \_\_\_\_\_  
 REMARKS \_\_\_\_\_

Preservatives: H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 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.  
 DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.  
 Rev. 2010-0325



## Carmen Aguila

---

**From:** Rachelle Arada  
**Sent:** Friday, June 24, 2011 3:12 PM  
**To:** Carmen Aguila  
**Cc:** customer.relations  
**Subject:** FW: Additional Analyses Request  
**Attachments:** Additional Analyses.pdf

Please log.

---

**From:** Fraychineaud, Matt [<mailto:MFRAYCHINEAUD@mactec.com>]  
**Sent:** Friday, June 24, 2011 3:07 PM  
**To:** Rachelle Arada  
**Cc:** Bing Roura  
**Subject:** Additional Analyses Request

Hi Rachelle:

Please see the attached chain of custody forms for additional analyses that we'd like to have conducted. The additions are shown in red ink and highlighted in yellow. Just call if you have questions.

Thanks.

Matt

**Matt Fraychineaud**  
**Principal Geologist**  
AMEC (formerly MACTEC Engineering and Consulting, Inc.)  
5628 East Slauson Avenue  
Los Angeles, CA 90040  
(323) 889-5310  
[mfraychineaud@mactec.com](mailto:mfraychineaud@mactec.com)