

## Rachelle Arada

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**From:** Fraychineaud, Matt [MFRAYCHINEAUD@mactec.com]  
**Sent:** Friday, August 05, 2011 2:21 PM  
**To:** Rachelle Arada  
**Subject:** Additional Analyses Request  
**Attachments:** E-110 and E-111 Additional Analyses.pdf

Hi Rachelle:

Please see that attached COC copies for additional analyses (red ink with yellow highlight). I'm aware that we did not preserve these samples using the 5035 field method but they have been chilled since they were collected and are within the 14-day hold time for VOC analysis.

Please let me know if you have any questions.

Thanks.

Matt

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



August 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.: 119195

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 29, 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:** 119195

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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.

Sample Receiving / General Comments

Headspace <5-6mm was noted on two voa vials.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-15
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 10:05:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-001A		

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

**EPA 8260B**

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1,1-Trichloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1,2,2-Tetrachloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1,2-Trichloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1-Dichloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1-Dichloroethene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,1-Dichloropropene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2,3-Trichlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2,3-Trichloropropane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2,4-Trichlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2,4-Trimethylbenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2-Dibromo-3-chloropropane	ND	7.1		µg/Kg	1	8/1/2011 02:03 PM
1,2-Dibromoethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2-Dichlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2-Dichloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,2-Dichloropropane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,3,5-Trimethylbenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,3-Dichlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,3-Dichloropropane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
1,4-Dichlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
2,2-Dichloropropane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
2-Chlorotoluene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
4-Chlorotoluene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
4-Isopropyltoluene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Benzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Bromobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Bromodichloromethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Bromoform	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Bromomethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Carbon tetrachloride	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Chlorobenzene	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Chloroethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Chloroform	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
Chloromethane	ND	3.6		µg/Kg	1	8/1/2011 02:03 PM
cis-1,2-Dichloroethene	ND	3.6		µg/Kg	1	8/1/2011 02:03 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-15
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 10:05:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-001A		

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

**EPA 8260B**

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Di-isopropyl ether	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Dibromochloromethane	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Dibromomethane	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Ethylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Hexachlorobutadiene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Isopropylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
m,p-Xylene	ND	7.1	µg/Kg	1	8/1/2011 02:03 PM
Methylene chloride	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
MTBE	4.9	3.6	µg/Kg	1	8/1/2011 02:03 PM
n-Butylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
n-Propylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Naphthalene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
o-Xylene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
sec-Butylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Styrene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Tert-Butanol	ND	71	µg/Kg	1	8/1/2011 02:03 PM
tert-Butylbenzene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Tetrachloroethene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Toluene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Trichloroethene	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Trichlorofluoromethane	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Vinyl chloride	ND	3.6	µg/Kg	1	8/1/2011 02:03 PM
Surr: 1,2-Dichloroethane-d4	122	65-141	%REC	1	8/1/2011 02:03 PM
Surr: 4-Bromofluorobenzene	92.1	57-134	%REC	1	8/1/2011 02:03 PM
Surr: Dibromofluoromethane	112	70-128	%REC	1	8/1/2011 02:03 PM
Surr: Toluene-d8	94.5	72-123	%REC	1	8/1/2011 02:03 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-15
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 10:05:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-001D		

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

**EPA 8015B(M)**

RunID: GC2_110802B	QC Batch: E11VS285	PrepDate: 7/28/2011	Analyst: <b>TP</b>		
GRO	ND	0.81	mg/Kg	1	8/2/2011 10:31 PM
Surr: Bromofluorobenzene (FID)	80.1	51-161	%REC	1	8/2/2011 10:31 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: 05-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-15
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 10:05:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119195-001G	

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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_110802B	QC Batch: 74666				PrepDate: 8/1/2011	Analyst: <b>CBR</b>
DRO	ND	10		mg/Kg	1	8/3/2011 01:39 AM
ORO	ND	10		mg/Kg	1	8/3/2011 01:39 AM
Surr: p-Terphenyl	80.9	63-152		%REC	1	8/3/2011 01:39 AM

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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
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# ANALYTICAL RESULTS

Print Date: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-55
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 12:40:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-002A		

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

### EPA 8260B

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL		
1,1,1,2-Tetrachloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1,1-Trichloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1,2,2-Tetrachloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1,2-Trichloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1-Dichloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1-Dichloroethene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,1-Dichloropropene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2,3-Trichlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2,3-Trichloropropane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2,4-Trichlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2,4-Trimethylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2-Dibromo-3-chloropropane	ND	7.6	µg/Kg	1	8/1/2011 02:21 PM
1,2-Dibromoethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2-Dichlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2-Dichloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,2-Dichloropropane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,3,5-Trimethylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,3-Dichlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,3-Dichloropropane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
1,4-Dichlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
2,2-Dichloropropane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
2-Chlorotoluene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
4-Chlorotoluene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
4-Isopropyltoluene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Benzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Bromobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Bromodichloromethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Bromoform	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Bromomethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Carbon tetrachloride	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Chlorobenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Chloroethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Chloroform	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Chloromethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
cis-1,2-Dichloroethene	ND	3.8	µg/Kg	1	8/1/2011 02:21 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
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**ANALYTICAL RESULTS**

Print Date: 05-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-55
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 12:40:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119195-002A	

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

**EPA 8260B**

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Di-isopropyl ether	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Dibromochloromethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Dibromomethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Dichlorodifluoromethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Ethyl Tert-butyl ether	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Ethylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Hexachlorobutadiene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Isopropylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
m,p-Xylene	ND	7.6	µg/Kg	1	8/1/2011 02:21 PM
Methylene chloride	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
MTBE	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
n-Butylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
n-Propylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Naphthalene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
o-Xylene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
sec-Butylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Styrene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Tert-amyl methyl ether	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Tert-Butanol	ND	76	µg/Kg	1	8/1/2011 02:21 PM
tert-Butylbenzene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Tetrachloroethene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Toluene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
trans-1,2-Dichloroethene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Trichloroethene	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Trichlorofluoromethane	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Vinyl chloride	ND	3.8	µg/Kg	1	8/1/2011 02:21 PM
Surr: 1,2-Dichloroethane-d4	123	65-141	%REC	1	8/1/2011 02:21 PM
Surr: 4-Bromofluorobenzene	91.3	57-134	%REC	1	8/1/2011 02:21 PM
Surr: Dibromofluoromethane	110	70-128	%REC	1	8/1/2011 02:21 PM
Surr: Toluene-d8	95.8	72-123	%REC	1	8/1/2011 02:21 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
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**ANALYTICAL RESULTS**  
 Print Date: 05-Aug-11

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<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-55
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 12:40:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119195-002D	

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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_110802B	QC Batch: E11VS285	PrepDate: 7/28/2011	Analyst: <b>TP</b>		
GRO	ND	0.80	mg/Kg	1	8/2/2011 10:47 PM
Surr: Bromofluorobenzene (FID)	101	51-161	%REC	1	8/2/2011 10:47 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
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**ANALYTICAL RESULTS**  
 Print Date: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-55
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 12:40:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-002G		

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_110802B	QC Batch: 74666			PrepDate: 8/1/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/3/2011 01:49 AM
ORO	ND	10		mg/Kg	1	8/3/2011 01:49 AM
Surr: p-Terphenyl	84.6	63-152		%REC	1	8/3/2011 01:49 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-70
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 2:15:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-003A		

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

**EPA 8260B**

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL		
1,1,1,2-Tetrachloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1,1-Trichloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1,2,2-Tetrachloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1,2-Trichloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1-Dichloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1-Dichloroethene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,1-Dichloropropene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2,3-Trichlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2,3-Trichloropropane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2,4-Trichlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2,4-Trimethylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2-Dibromo-3-chloropropane	ND	8.3	µg/Kg	1	8/1/2011 02:39 PM
1,2-Dibromoethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2-Dichlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2-Dichloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,2-Dichloropropane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,3,5-Trimethylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,3-Dichlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,3-Dichloropropane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
1,4-Dichlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
2,2-Dichloropropane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
2-Chlorotoluene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
4-Chlorotoluene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
4-Isopropyltoluene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Benzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Bromobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Bromodichloromethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Bromoform	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Bromomethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Carbon tetrachloride	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Chlorobenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Chloroethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Chloroform	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Chloromethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
cis-1,2-Dichloroethene	ND	4.1	µg/Kg	1	8/1/2011 02:39 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-70
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 2:15:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-003A		

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

**EPA 8260B**

RunID: MS4_110801A	QC Batch: K11VS200	PrepDate: 7/28/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Di-isopropyl ether	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Dibromochloromethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Dibromomethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Dichlorodifluoromethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Ethyl Tert-butyl ether	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Ethylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Hexachlorobutadiene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Isopropylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
m,p-Xylene	ND	8.3	µg/Kg	1	8/1/2011 02:39 PM
Methylene chloride	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
MTBE	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
n-Butylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
n-Propylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Naphthalene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
o-Xylene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
sec-Butylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Styrene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Tert-amyl methyl ether	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Tert-Butanol	ND	83	µg/Kg	1	8/1/2011 02:39 PM
tert-Butylbenzene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Tetrachloroethene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Toluene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
trans-1,2-Dichloroethene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Trichloroethene	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Trichlorofluoromethane	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Vinyl chloride	ND	4.1	µg/Kg	1	8/1/2011 02:39 PM
Surr: 1,2-Dichloroethane-d4	123	65-141	%REC	1	8/1/2011 02:39 PM
Surr: 4-Bromofluorobenzene	91.0	57-134	%REC	1	8/1/2011 02:39 PM
Surr: Dibromofluoromethane	108	70-128	%REC	1	8/1/2011 02:39 PM
Surr: Toluene-d8	95.4	72-123	%REC	1	8/1/2011 02:39 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-70
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 2:15:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-003D		

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

**EPA 8015B(M)**

RunID: GC2_110802B	QC Batch: E11VS285	PrepDate: 7/28/2011	Analyst: <b>TP</b>		
GRO	ND	0.82	mg/Kg	1	8/2/2011 11:03 PM
Surr: Bromofluorobenzene (FID)	103	51-161	%REC	1	8/2/2011 11:03 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: 05-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-70
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 2:15:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119195-003G	

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_110802B	QC Batch: 74666			PrepDate: 8/1/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/3/2011 01:59 AM
ORO	ND	10		mg/Kg	1	8/3/2011 01:59 AM
Surr: p-Terphenyl	83.3	63-152		%REC	1	8/3/2011 01:59 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: 05-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-GW
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 11:30:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 119195-004A	

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

**EPA 8260B**

RunID: MS2_110801A	QC Batch: Q11VW142	PrepDate:	Analyst: <b>BD</b>		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
2-Chlorotoluene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
4-Chlorotoluene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Benzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Bromobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Bromodichloromethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Bromoform	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Bromomethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Carbon tetrachloride	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Chlorobenzene	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Chloroethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Chloroform	ND	0.50	µg/L	1	8/1/2011 08:30 PM
Chloromethane	ND	0.50	µg/L	1	8/1/2011 08:30 PM
cis-1,2-Dichloroethene	3.4	0.50	µg/L	1	8/1/2011 08:30 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-GW
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 11:30:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	119195-004A		

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

**EPA 8260B**

RunID: MS2_110801A	QC Batch: Q11VW142	PrepDate:	Analyst: <b>BD</b>
cis-1,3-Dichloropropene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Di-isopropyl ether	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Dibromochloromethane	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Dibromomethane	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Dichlorodifluoromethane	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Ethyl tert-butyl ether	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Ethylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Hexachlorobutadiene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Isopropylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
m,p-Xylene	ND	1.0	µg/L 1 8/1/2011 08:30 PM
Methylene chloride	ND	1.0	µg/L 1 8/1/2011 08:30 PM
MTBE	14	0.50	µg/L 1 8/1/2011 08:30 PM
n-Butylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
n-Propylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Naphthalene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
o-Xylene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
sec-Butylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Styrene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Tert-amyl methyl ether	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Tert-Butanol	ND	10	µg/L 1 8/1/2011 08:30 PM
tert-Butylbenzene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Tetrachloroethene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Toluene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Trichloroethene	1.0	0.50	µg/L 1 8/1/2011 08:30 PM
Trichlorofluoromethane	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Vinyl chloride	ND	0.50	µg/L 1 8/1/2011 08:30 PM
Surr: 1,2-Dichloroethane-d4	73.8	70-130	%REC 1 8/1/2011 08:30 PM
Surr: 4-Bromofluorobenzene	96.4	70-130	%REC 1 8/1/2011 08:30 PM
Surr: Dibromofluoromethane	86.0	70-130	%REC 1 8/1/2011 08:30 PM
Surr: Toluene-d8	90.5	70-130	%REC 1 8/1/2011 08:30 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: 05-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-GW
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 11:30:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 119195-004B	

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

**EPA 8015B(M)**

RunID: GC19_110801B	QC Batch: M11VW151	PrepDate:	Analyst: <b>BB</b>		
GRO	ND	0.20	mg/L	1	8/1/2011 07:19 PM
Surr: Bromofluorobenzene (FID)	88.2	70-130	%REC	1	8/1/2011 07:19 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: 05-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-111-GW
<b>Lab Order:</b> 119195	<b>Collection Date:</b> 7/28/2011 11:30:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> GROUNDWATER
<b>Lab ID:</b> 119195-004C	

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

EPA 3510C		EPA 8015B(M)				
RunID: GC16_110804A	QC Batch: 74703			PrepDate: 8/3/2011	Analyst: CBR	
DRO	ND	0.20		mg/L	1	8/4/2011 03:38 PM
ORO	ND	0.20		mg/L	1	8/4/2011 03:38 PM
Surr: p-Terphenyl	72.2	36-126		%REC	1	8/4/2011 03:38 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: 05-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-111-30
<b>Lab Order:</b>	119195	<b>Collection Date:</b>	7/28/2011 10:30:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119195-008A		

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110803D	QC Batch: 74700			PrepDate: 8/3/2011		Analyst: IL
Antimony	ND	2.0		mg/Kg	1	8/3/2011 02:42 PM
Arsenic	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Barium	66	1.0		mg/Kg	1	8/3/2011 02:42 PM
Beryllium	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Cadmium	1.1	1.0		mg/Kg	1	8/3/2011 02:42 PM
Chromium	25	1.0		mg/Kg	1	8/3/2011 02:42 PM
Cobalt	10	1.0		mg/Kg	1	8/3/2011 02:42 PM
Copper	12	2.0		mg/Kg	1	8/3/2011 02:42 PM
Lead	1.9	1.0		mg/Kg	1	8/3/2011 02:42 PM
Molybdenum	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Nickel	23	1.0		mg/Kg	1	8/3/2011 02:42 PM
Selenium	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Silver	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Thallium	ND	1.0		mg/Kg	1	8/3/2011 02:42 PM
Vanadium	24	1.0		mg/Kg	1	8/3/2011 02:42 PM
Zinc	34	1.0		mg/Kg	1	8/3/2011 02:42 PM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110803A	QC Batch: 74694			PrepDate: 8/2/2011		Analyst: VV
Mercury	ND	0.10		mg/Kg	1	8/3/2011 12:09 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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

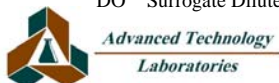
**TestCode: 6010\_S**

Sample ID: <b>MB-74700</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135569</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74700</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220449</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	0.061	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	0.111	1.0									
Vanadium	ND	1.0									
Zinc	0.814	1.0									

Sample ID: <b>LCS-74700</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135569</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74700</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220450</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	48.571	2.0	50.00	0	97.1	80	120				
Arsenic	48.189	1.0	50.00	0	96.4	80	120				
Barium	50.176	1.0	50.00	0.06135	100	80	120				
Cadmium	48.140	1.0	50.00	0	96.3	80	120				
Chromium	46.228	1.0	50.00	0	92.5	80	120				
Cobalt	50.056	1.0	50.00	0	100	80	120				
Copper	49.876	2.0	50.00	0	99.8	80	120				
Lead	49.397	1.0	50.00	0	98.8	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

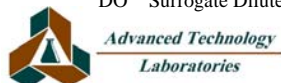
**TestCode: 6010\_S**

Sample ID: <b>LCS-74700</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/3/2011</b>		RunNo: <b>135569</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>74700</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>8/3/2011</b>		SeqNo: <b>2220450</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Molybdenum	51.804	1.0	50.00	0	104	80	120					
Nickel	49.619	1.0	50.00	0	99.2	80	120					
Selenium	45.592	1.0	50.00	0	91.2	80	120					
Silver	49.780	1.0	50.00	0	99.6	80	120					
Thallium	47.718	1.0	50.00	0.1108	95.2	80	120					
Vanadium	49.361	1.0	50.00	0	98.7	80	120					
Zinc	48.970	1.0	50.00	0.8136	96.3	80	120					

Sample ID: <b>119200-012A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/3/2011</b>		RunNo: <b>135569</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74700</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>8/3/2011</b>		SeqNo: <b>2220469</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	78.085	2.0	125.0	0.2317	62.3	32	105					
Arsenic	104.342	1.0	125.0	15.63	71.0	49	106					
Barium	184.499	1.0	125.0	86.40	78.5	31	133					
Cadmium	86.706	1.0	125.0	0.5723	68.9	51	103					
Chromium	93.833	1.0	125.0	11.94	65.5	45	114					
Cobalt	94.518	1.0	125.0	3.613	72.7	52	106					
Copper	103.314	2.0	125.0	4.466	79.1	54	125					
Lead	107.580	1.0	125.0	22.83	67.8	34	126					
Molybdenum	88.780	1.0	125.0	0	71.0	54	106					
Nickel	89.365	1.0	125.0	5.873	66.8	45	111					
Selenium	82.027	1.0	125.0	0	65.6	47	104					
Silver	92.089	1.0	125.0	0	73.7	56	112					
Thallium	82.542	1.0	125.0	0	66.0	46	101					
Vanadium	119.977	1.0	125.0	24.17	76.6	54	114					
Zinc	136.924	1.0	125.0	47.39	71.6	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

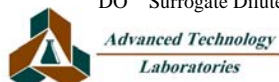
Sample ID: <b>119200-012A-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/3/2011</b>		RunNo: <b>135569</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74700</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/3/2011</b>		SeqNo: <b>2220470</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.349	2.0	125.0	0.2317	63.3	32	105	78.09	1.61	20	
Arsenic	110.217	1.0	125.0	15.63	75.7	49	106	104.3	5.48	20	
Barium	183.393	1.0	125.0	86.40	77.6	31	133	184.5	0.601	20	
Cadmium	89.366	1.0	125.0	0.5723	71.0	51	103	86.71	3.02	20	
Chromium	97.994	1.0	125.0	11.94	68.8	45	114	93.83	4.34	20	
Cobalt	97.341	1.0	125.0	3.613	75.0	52	106	94.52	2.94	20	
Copper	105.728	2.0	125.0	4.466	81.0	54	125	103.3	2.31	20	
Lead	111.439	1.0	125.0	22.83	70.9	34	126	107.6	3.52	20	
Molybdenum	91.726	1.0	125.0	0	73.4	54	106	88.78	3.26	20	
Nickel	93.075	1.0	125.0	5.873	69.8	45	111	89.36	4.07	20	
Selenium	84.712	1.0	125.0	0	67.8	47	104	82.03	3.22	20	
Silver	94.558	1.0	125.0	0	75.6	56	112	92.09	2.64	20	
Thallium	85.006	1.0	125.0	0	68.0	46	101	82.54	2.94	20	
Vanadium	121.935	1.0	125.0	24.17	78.2	54	114	120.0	1.62	20	
Zinc	139.377	1.0	125.0	47.39	73.6	28	125	136.9	1.78	20	

Sample ID: <b>119200-012A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/3/2011</b>		RunNo: <b>135569</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74700</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/3/2011</b>		SeqNo: <b>2220475</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	102.454	5.0	125.0	0	82.0	56	106				

Sample ID: <b>119200-012A-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/3/2011</b>		RunNo: <b>135569</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74700</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/3/2011</b>		SeqNo: <b>2220476</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	104.805	5.0	125.0	0	83.8	56	106	102.5	2.27	20	

**Qualifiers:**

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





**CLIENT:** Mactec  
**Work Order:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-74694</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/2/2011</b>	RunNo: <b>135553</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74694</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220062</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-74694</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/2/2011</b>	RunNo: <b>135553</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74694</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220063</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.750 0.10 0.8300 0 90.3 80 120

Sample ID: <b>119235-003A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/2/2011</b>	RunNo: <b>135553</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74694</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220064</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

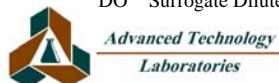
Mercury 0.756 0.10 0.8300 0 91.1 70 130

Sample ID: <b>119235-003A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/2/2011</b>	RunNo: <b>135553</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74694</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2220065</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.750 0.10 0.8300 0 90.4 70 130 0.7564 0.844 20

**Qualifiers:**

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



**CLIENT:** Mactec  
**Work Order:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>MB-74666</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/1/2011</b>	RunNo: <b>135542</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74666</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2219816</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	71.200		80.00		89.0	63	152				

Sample ID: <b>LCS-74666</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/1/2011</b>	RunNo: <b>135542</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74666</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2219817</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	833.520	10	1000	0	83.4	76	139				
Surr: p-Terphenyl	73.700		80.00		92.1	63	152				

Sample ID: <b>119194-002GMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/1/2011</b>	RunNo: <b>135542</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74666</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2219818</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

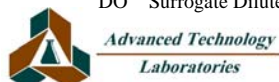
DRO	820.410	10	1000	0	82.0	60	158				
Surr: p-Terphenyl	79.790		80.00		99.7	63	152				

Sample ID: <b>119194-002GMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/1/2011</b>	RunNo: <b>135542</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74666</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/3/2011</b>	SeqNo: <b>2219819</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	899.490	10	1000	0	89.9	60	158	820.4	9.20	20	
Surr: p-Terphenyl	78.410		80.00		98.0	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>E110802LC3</b>		SampType: <b>LCS</b>		TestCode: <b>8015_S_G 50</b>		Units: <b>mg/Kg</b>		Prep Date:		RunNo: <b>135537</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>E11VS285</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/2/2011</b>		SeqNo: <b>2220597</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	4.813	1.0	5.000	0	96.3	70	130					
Surr: Bromofluorobenzene (FID)	129.706		100.0		130	51	161					

Sample ID: <b>E110802MB2MS</b>		SampType: <b>MS</b>		TestCode: <b>8015_S_G 50</b>		Units: <b>mg/Kg</b>		Prep Date:		RunNo: <b>135537</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>E11VS285</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/2/2011</b>		SeqNo: <b>2220598</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	4.687	1.0	5.000	0	93.7	41	146					
Surr: Bromofluorobenzene (FID)	121.656		100.0		122	51	161					

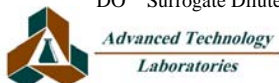
Sample ID: <b>E110802MB2MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8015_S_G 50</b>		Units: <b>mg/Kg</b>		Prep Date:		RunNo: <b>135537</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>E11VS285</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/2/2011</b>		SeqNo: <b>2220599</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	4.690	1.0	5.000	0	93.8	41	146	4.687	0.0640	20		
Surr: Bromofluorobenzene (FID)	114.568		100.0		115	51	161		0	0		

Sample ID: <b>E110802MB2</b>		SampType: <b>MBLK</b>		TestCode: <b>8015_S_G 50</b>		Units: <b>mg/Kg</b>		Prep Date:		RunNo: <b>135537</b>		
Client ID: <b>PBS</b>		Batch ID: <b>E11VS285</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/2/2011</b>		SeqNo: <b>2220600</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)	79.954		100.0		80.0	51	161					

Sample ID: <b>119199-026AMS</b>		SampType: <b>MS</b>		TestCode: <b>8015_S_G 50</b>		Units: <b>mg/Kg</b>		Prep Date:		RunNo: <b>135537</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>E11VS285</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/2/2011</b>		SeqNo: <b>2220605</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	4.686	1.0	5.000	0	93.7	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

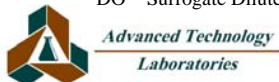
**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>119199-026AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135537</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS285</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/2/2011</b>	SeqNo: <b>2220605</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	122.372		100.0		122	51	161				

Sample ID: <b>119199-026AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135537</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS285</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/2/2011</b>	SeqNo: <b>2220606</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.702	1.0	5.000	0	94.0	41	146	4.686	0.341	20	
Surr: Bromofluorobenzene (FID)	119.015		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   |  |



**CLIENT:** Mactec  
**Work Order:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_DM**

Sample ID: <b>MB-74703</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135599</b>						
Client ID: <b>PBW</b>	Batch ID: <b>74703</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>8/4/2011</b>	SeqNo: <b>2220873</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	0.037		0.08000		46.5	36	126				

Sample ID: <b>LCS-74703</b>	SampType: <b>LCS</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135599</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>74703</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>8/4/2011</b>	SeqNo: <b>2220874</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.461	0.20	0.5000	0	92.1	52	128				
Surr: p-Terphenyl	0.039		0.08000		48.3	36	126				

Sample ID: <b>MB-74703MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135599</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74703</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>8/4/2011</b>	SeqNo: <b>2220875</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

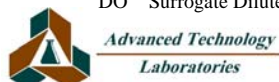
DRO	0.532	0.20	0.5000	0	106	52	128				
Surr: p-Terphenyl	0.048		0.08000		59.7	36	126				

Sample ID: <b>MB-74703MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_W_DM</b>	Units: <b>mg/L</b>	Prep Date: <b>8/3/2011</b>	RunNo: <b>135599</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74703</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>		Analysis Date: <b>8/4/2011</b>	SeqNo: <b>2220876</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.481	0.20	0.5000	0	96.2	52	128	0.5317	9.99	20	
Surr: p-Terphenyl	0.038		0.08000		48.1	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>M110801LCS2</b>		SampType: <b>LCS</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>135493</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>M11VW151</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218831</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	1.106	0.20	1.000	0	111	70	130					
Surr: Bromofluorobenzene (FID)	91.018		100.0		91.0	70	130					

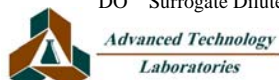
Sample ID: <b>M110801MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>135493</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>M11VW151</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218833</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	1.098	0.20	1.000	0	110	70	130					
Surr: Bromofluorobenzene (FID)	90.442		100.0		90.4	70	130					

Sample ID: <b>M110801MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>135493</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>M11VW151</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218834</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	1.098	5.81	20		
Surr: Bromofluorobenzene (FID)	89.859		100.0		89.9	70	130		0	0		

Sample ID: <b>M110801MB1</b>		SampType: <b>MBLK</b>		TestCode: <b>8015_W_G P</b>		Units: <b>mg/L</b>		Prep Date:		RunNo: <b>135493</b>		
Client ID: <b>PBW</b>		Batch ID: <b>M11VW151</b>		TestNo: <b>EPA 8015B(M)</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218835</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)	88.225		100.0		88.2	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

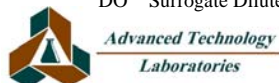
Sample ID: <b>K110801LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135474</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>K11VS200</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2220034</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	50.640	5.0	50.00	0	101	70	130					
Benzene	97.810	5.0	100.0	0	97.8	70	130					
Chlorobenzene	52.090	5.0	50.00	0	104	70	130					
MTBE	61.640	5.0	50.00	0	123	70	130					
Toluene	97.780	5.0	100.0	0	97.8	70	130					
Trichloroethene	49.750	5.0	50.00	0	99.5	70	130					
Surr: 1,2-Dichloroethane-d4	55.800		50.00		112	65	141					
Surr: 4-Bromofluorobenzene	46.860		50.00		93.7	57	134					
Surr: Dibromofluoromethane	51.130		50.00		102	70	128					
Surr: Toluene-d8	46.710		50.00		93.4	72	123					

Sample ID: <b>K110801MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135474</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>K11VS200</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2220035</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	49.230	5.0	50.00	0	98.5	70	130					
Benzene	97.090	5.0	100.0	0	97.1	70	130					
Chlorobenzene	51.750	5.0	50.00	0	104	70	130					
MTBE	60.900	5.0	50.00	0	122	70	130					
Toluene	97.340	5.0	100.0	0	97.3	70	130					
Trichloroethene	49.210	5.0	50.00	0	98.4	70	130					
Surr: 1,2-Dichloroethane-d4	53.210		50.00		106	65	141					
Surr: 4-Bromofluorobenzene	46.480		50.00		93.0	57	134					
Surr: Dibromofluoromethane	51.630		50.00		103	70	128					
Surr: Toluene-d8	46.590		50.00		93.2	72	123					

Sample ID: <b>K110801MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135474</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>K11VS200</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2220036</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   |  |



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CLIENT: Mactec

Work Order: 119195

Project: METRO WESTSIDE EXTENSION, 4953-10-1

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S\_5035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	47.640	5.0	50.00	0	95.3	70	130	49.23	3.28	20	
Benzene	96.990	5.0	100.0	0	97.0	70	130	97.09	0.103	20	
Chlorobenzene	50.550	5.0	50.00	0	101	70	130	51.75	2.35	20	
MTBE	59.970	5.0	50.00	0	120	70	130	60.90	1.54	20	
Toluene	97.170	5.0	100.0	0	97.2	70	130	97.34	0.175	20	
Trichloroethene	48.820	5.0	50.00	0	97.6	70	130	49.21	0.796	20	
Surr: 1,2-Dichloroethane-d4	52.940		50.00		106	65	141		0	0	
Surr: 4-Bromofluorobenzene	44.580		50.00		89.2	57	134		0	0	
Surr: Dibromofluoromethane	50.720		50.00		101	70	128		0	0	
Surr: Toluene-d8	47.420		50.00		94.8	72	123		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	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
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**CLIENT:** Mactec  
**Work Order:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110801MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135474</b>
Client ID: <b>PBS</b>	Batch ID: <b>K11VS200</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>	SeqNo: <b>2220037</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:**

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



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

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110801MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135474</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS200</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>8/1/2011</b>	SeqNo: <b>2220037</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	55.660		50.00		111	65	141				
Surr: 4-Bromofluorobenzene	43.630		50.00		87.3	57	134				
Surr: Dibromofluoromethane	51.660		50.00		103	70	128				
Surr: Toluene-d8	47.360		50.00		94.7	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:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

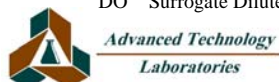
Sample ID: <b>Q110801CS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>135509</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>Q11VW142</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/1/2011</b>		SeqNo: <b>2218975</b>				
Analyte	Result	PQL	SPK value	SPK 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: 119195

Project: METRO WESTSIDE EXTENSION, 4953-10-1

# ANALYTICAL QC SUMMARY REPORT

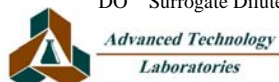
TestCode: 8260\_WP\_LL

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
- 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:** 119195  
**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   |  |



*Advanced Technology  
Laboratories*

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

**CLIENT:** Mactec  
**Work Order:** 119195  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

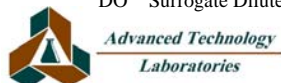
## ANALYTICAL QC SUMMARY REPORT

**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   |  |



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

Client: **MARTEC**  
 Attn: **MATT FRAYCHINEAUD**

Project Name: **METRO WESTSIDE EXTENSION**  
 Relinquished by: **DUAN D. SWIDER** Date: **7-29-11** Time: **7:00**  
 Relinquished by: **MATT FRAYCHINEAUD** Date: **7/29/11** Time: **1:30**  
 Relinquished by: **MATT FRAYCHINEAUD** Date: **7/29/11** Time: **1:35**

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

Sample Condition Upon Receipt:  
 1. CHILLED  2. SEALED  3. N  4. Y  N   
 5. # OF SPLS MATCH COC  Y  N   
 6. PRESERVED  Y  N

Quote #: **201106374** Quote #: **K716**  
 Logged By: \_\_\_\_\_ Date: **7/29/11**  
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

Address: **5628 E. SLAUSON AVE** State: **CA** Zip Code: **90404**  
 City: **LOS ANGELES**

Project #: **4953-10-1561** Sampler: **DUAN D. SWIDER**  
 Date: **7-29-11** Time: **7:00** Date: **7/29/11** Time: **0700**  
 Date: **7/29/11** Time: **1:30** Date: **7/29/11** Time: **1:30**  
 Date: **7/29/11** Time: **1:35** Date: **7/29/11** Time: **1:35**

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: **Matt Fraychineaud** Date: **7/29/11**  
 Print Name: **Matt Fraychineaud** Signature: \_\_\_\_\_

Special Instructions/Comments: \_\_\_\_\_

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

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description	Sample I.D. / Location	Date	Time	SPECIFY APPROPRIATE MATRIX		RESERVATION	Q A / Q C
						Container(s)	Type		
	119195-107	E-111-15		7/28	10:05	X	SOIL	E 7 TV	RTNE <input type="checkbox"/> CT <input type="checkbox"/> Legal <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode <input type="checkbox"/> OTHER <input type="checkbox"/>
		E-111-55		7/28	12:40	X	SOIL	E 7 TV	
		E-111-70		7/28	14:15	X	SOIL	E 8 TV	
		E-111-64		7/28	11:30	X	SOIL	E 6 JV	
		E-111-10		7/28	10:00	X	SOIL	1 T	Hold
		E-111-20		7/28	10:10	X	SOIL	1 T	Hold
		E-111-25		7/28	10:20	X	SOIL	1 T	Hold
		E-111-30		7/28	10:30	X	SOIL	E 2 T	Hold
		E-111-35		7/28	10:40	X	SOIL	2 T	Hold
		E-111-45		7/28	11:45	X	SOIL	2 T	Hold

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)

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

Figure I-1.434

# CHAIN OF CUSTODY RECORD

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

P.O.#: 201106374 Quote #: 1476  
 Logged By: \_\_\_\_\_ Date: \_\_\_\_\_  
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

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

Client: MACTEC Address: 5628 E. SLAVSON AVE State: CA Zip Code: 90040  
 Attn: MATT FRAYCHINEAUD City: LOS ANGELES State: CA Zip Code: 90040  
 Project Name: MARCO WESTSIDE EXTENSION Project #: 4953-10-1561 Sampler: DIAN D. SUIDER  
 Relinquished by: (Signature and Printed Name) DIAN D. SUIDER Date: 7-29-11 Time: 7:00  
 Relinquished by: (Signature and Printed Name) MATT FRAYCHINEAUD Date: 7/29/11 Time: 10:30  
 Relinquished by: (Signature and Printed Name) MATT FRAYCHINEAUD Date: 7/29/11 Time: 11:55

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: Matt Fraychineaud Date: 7/29/11  
Matt Fraychineaud Date: 7/29/11  
Matt Fraychineaud Date: 7/29/11

**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	Sample I.D. / Location	Date	Time
119195-11		E-111-50	7/28	12:20
12		E-111-60	7/28	13:00
13		E-111-65	7/28	13:40
14		E-111-75	7/28	14:50

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

Circle or Add Analysis(es) Requested:  
 8081A (Pesticides)  8260B (Wattles)  8270C (BNA)  6010B (Total Metal)  8015B (GRO) / 8021 (BTEX)  8015B (DRO)  TITLE 22 / CAM 17 (6010 / 7000)   
 SEDIMENT  SOIL  DRINKING WATER  GROUND WATER  WASTEWATER  STORMWATER  AQUEOUS

**QA/QC**  
 RTNE  CT  Legal   
 SWRCB  Logcode  OTHER \_\_\_\_\_  
 REMARKS: Hold  
Hold  
Hold  
Hold

**SPESIFICATION**  
 SPECIFY APPROPRIATE MATRIX  
 Container(s) # Type  
 1 T  
 1 T  
 1 T  
 2 T

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>

TAT:  A= Overnight ≤ 24 hrs  B= Emergency Next workday  C= Critical 2 Workdays  D= Urgent 3 Workdays  E= Routine 7 Workdays  
 Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal



## Fernando Diwa

---

**From:** Rachelle Arada  
**Sent:** Friday, July 29, 2011 3:45 PM  
**To:** Fernando Diwa  
**Cc:** Carmen Aguila; customer.relations  
**Subject:** FW: Westside Extension Samples: Boring E-111

---

**From:** Fraychineaud, Matt [<mailto:MFRAYCHINEAUD@mactec.com>]  
**Sent:** Friday, July 29, 2011 3:42 PM  
**To:** Rachelle Arada  
**Subject:** Westside Extension Samples: Boring E-111

Hi Rachelle:

Per my discussion with Margo this afternoon, please analyze the groundwater samples for:

- VOC + Oxy
- TPH-G/D/O

We forgot to mark that on the COC. Tell Margo thanks for catching that.

Matt

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

July 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.: 119094

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 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 "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.



**CLIENT:** Mactec  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1  
**Lab Order:** 119094

**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

Samples 119094-001D, 119094-002D and 119094-003D, surrogate recovery biased high possibly due to matrix interferences.

Analytical Comments for EPA 8015B(M) DRO/ORO

Samples 119094-001G, 119094-002G and 119094-003G, surrogate diluted out.

Analytical Comments for EPA 8260B

Samples 119094-001C, 119094-002C and 119094-003C, dilution was necessary due to high concentration of hydrocarbons.

Samples 119094-002C and 119094-003C, surrogate recovery biased high possibly due to matrix interferences.

Analytical Comments for EPA 8270C

Samples 119094-001G, 119094-002G and 119094-003G, dilution was necessary due to high concentrations of non-target extractable analytes.

Samples 119094-001G, 119094-002G and 119094-003G, surrogates diluted out.

Sample 119132-005AMSD, Matrix Spike Duplicate (MSD) is outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-70
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 1:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-001C		

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

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL
1,1,1,2-Tetrachloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1,1-Trichloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1,2,2-Tetrachloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1,2-Trichloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1-Dichloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1-Dichloroethene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,1-Dichloropropene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2,3-Trichlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2,3-Trichloropropane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2,4-Trichlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2,4-Trimethylbenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2-Dibromo-3-chloropropane	ND	430	µg/Kg 50 7/25/2011 12:46 PM
1,2-Dibromoethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2-Dichlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2-Dichloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,2-Dichloropropane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,3,5-Trimethylbenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,3-Dichlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,3-Dichloropropane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
1,4-Dichlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
2,2-Dichloropropane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
2-Chlorotoluene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
4-Chlorotoluene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
4-Isopropyltoluene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Benzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Bromobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Bromodichloromethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Bromoform	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Bromomethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Carbon tetrachloride	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Chlorobenzene	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Chloroethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Chloroform	ND	210	µg/Kg 50 7/25/2011 12:46 PM
Chloromethane	ND	210	µg/Kg 50 7/25/2011 12:46 PM
cis-1,2-Dichloroethene	ND	210	µg/Kg 50 7/25/2011 12:46 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-70
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 1:35:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-001C	

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

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Di-isopropyl ether	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Dibromochloromethane	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Dibromomethane	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Dichlorodifluoromethane	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Ethyl Tert-butyl ether	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Ethylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Hexachlorobutadiene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Isopropylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
m,p-Xylene	ND	430	µg/Kg	50	7/25/2011 12:46 PM
Methylene chloride	ND	210	µg/Kg	50	7/25/2011 12:46 PM
MTBE	ND	210	µg/Kg	50	7/25/2011 12:46 PM
n-Butylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
n-Propylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Naphthalene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
o-Xylene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
sec-Butylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Styrene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Tert-amyl methyl ether	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Tert-Butanol	ND	4300	µg/Kg	50	7/25/2011 12:46 PM
tert-Butylbenzene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Tetrachloroethene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Toluene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
trans-1,2-Dichloroethene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Trichloroethene	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Trichlorofluoromethane	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Vinyl chloride	ND	210	µg/Kg	50	7/25/2011 12:46 PM
Surr: 1,2-Dichloroethane-d4	113	65-141	%REC	50	7/25/2011 12:46 PM
Surr: 4-Bromofluorobenzene	120	57-134	%REC	50	7/25/2011 12:46 PM
Surr: Dibromofluoromethane	109	70-128	%REC	50	7/25/2011 12:46 PM
Surr: Toluene-d8	100	72-123	%REC	50	7/25/2011 12:46 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: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-70
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 1:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-001D		

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

**EPA 8015B(M)**

RunID: GC2_110726A	QC Batch: E11VS274	PrepDate: 7/21/2011	Analyst: <b>TP</b>
GRO	33	0.88	mg/Kg
Surr: Bromofluorobenzene (FID)	1180	51-161	S %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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**ANALYTICAL RESULTS**

Print Date: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-70
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 1:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-001G		

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_110725A	QC Batch: 74513			PrepDate: 7/25/2011		Analyst: CBR
DRO	32000	200		mg/Kg	20	7/26/2011 08:09 AM
ORO	37000	200		mg/Kg	20	7/26/2011 08:09 AM
Surr: p-Terphenyl	0	63-152	SDO	%REC	20	7/26/2011 08:09 AM
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
<b>EPA 3550B</b>			<b>EPA 8270C</b>			
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
1,2,4-Trichlorobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
1,2-Dichlorobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
1,3-Dichlorobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
1,4-Dichlorobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2,4,5-Trichlorophenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2,4,6-Trichlorophenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2,4-Dichlorophenol	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
2,4-Dimethylphenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2,4-Dinitrophenol	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
2,4-Dinitrotoluene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2,6-Dinitrotoluene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2-Chloronaphthalene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2-Chlorophenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2-Methylnaphthalene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2-Methylphenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
2-Nitroaniline	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
2-Nitrophenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
3,3'-Dichlorobenzidine	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
3-Nitroaniline	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
4,6-Dinitro-2-methylphenol	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
4-Bromophenyl-phenylether	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
4-Chloro-3-methylphenol	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
4-Chloroaniline	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
4-Chlorophenyl-phenylether	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
4-Methylphenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
4-Nitroaniline	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
4-Nitrophenol	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
Acenaphthene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Acenaphthylene	ND	160000		µg/Kg	50	7/28/2011 01:13 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: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-70
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 1:35:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-001G		

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

### EPA 3550B

### EPA 8270C

RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011	Analyst: JSD	
Anthracene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzidine (M)	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
Benzo(a)anthracene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzo(a)pyrene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzo(b)fluoranthene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzo(g,h,i)perylene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzo(k)fluoranthene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Benzoic acid	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
Benzyl alcohol	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
Bis(2-chloroethoxy)methane	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Bis(2-chloroethyl)ether	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Bis(2-chloroisopropyl)ether	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Bis(2-ethylhexyl)phthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Butylbenzylphthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Chrysene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Di-n-butylphthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Di-n-octylphthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Dibenz(a,h)anthracene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Dibenzofuran	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Diethylphthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Dimethylphthalate	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Fluoranthene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Fluorene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Hexachlorobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Hexachlorobutadiene	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
Hexachlorocyclopentadiene	ND	330000		µg/Kg	50	7/28/2011 01:13 PM
Hexachloroethane	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Indeno(1,2,3-cd)pyrene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Isophorone	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
N-Nitrosodi-n-propylamine	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
N-Nitrosodiphenylamine	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Naphthalene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Nitrobenzene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Pentachlorophenol	ND	820000		µg/Kg	50	7/28/2011 01:13 PM
Phenanthrene	ND	160000		µg/Kg	50	7/28/2011 01:13 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-70
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 1:35:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-001G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>			<b>EPA 8270C</b>		
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
Phenol	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Pyrene	ND	160000		µg/Kg	50	7/28/2011 01:13 PM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	50	7/28/2011 01:13 PM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	50	7/28/2011 01:13 PM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	50	7/28/2011 01:13 PM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	50	7/28/2011 01:13 PM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	50	7/28/2011 01:13 PM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	50	7/28/2011 01:13 PM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	50	7/28/2011 01:13 PM
Surr: Phenol-d5	0	46-118	SDO	%REC	50	7/28/2011 01:13 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-75
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 2:17:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-002C	

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

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1,1-Trichloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1,2,2-Tetrachloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1,2-Trichloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1-Dichloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1-Dichloroethene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,1-Dichloropropene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2,3-Trichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2,3-Trichloropropane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2,4-Trichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2,4-Trimethylbenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2-Dibromo-3-chloropropane	ND	450		µg/Kg	50	7/25/2011 01:40 PM
1,2-Dibromoethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2-Dichloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,2-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,3,5-Trimethylbenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,3-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,3-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
1,4-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
2,2-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
2-Chlorotoluene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
4-Chlorotoluene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
4-Isopropyltoluene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Benzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Bromobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Bromodichloromethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Bromoform	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Bromomethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Carbon tetrachloride	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Chlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Chloroethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Chloroform	ND	220		µg/Kg	50	7/25/2011 01:40 PM
Chloromethane	ND	220		µg/Kg	50	7/25/2011 01:40 PM
cis-1,2-Dichloroethene	ND	220		µg/Kg	50	7/25/2011 01:40 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-75
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 2:17:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-002C	

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

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL
cis-1,3-Dichloropropene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Di-isopropyl ether	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Dibromochloromethane	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Dibromomethane	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Dichlorodifluoromethane	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Ethyl Tert-butyl ether	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Ethylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Hexachlorobutadiene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Isopropylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
m,p-Xylene	ND	450	µg/Kg 50 7/25/2011 01:40 PM
Methylene chloride	ND	220	µg/Kg 50 7/25/2011 01:40 PM
MTBE	ND	220	µg/Kg 50 7/25/2011 01:40 PM
n-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
n-Propylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Naphthalene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
o-Xylene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
sec-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Styrene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Tert-amyl methyl ether	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Tert-Butanol	ND	4500	µg/Kg 50 7/25/2011 01:40 PM
tert-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Tetrachloroethene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Toluene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
trans-1,2-Dichloroethene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Trichloroethene	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Trichlorofluoromethane	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Vinyl chloride	ND	220	µg/Kg 50 7/25/2011 01:40 PM
Surr: 1,2-Dichloroethane-d4	101	65-141	%REC 50 7/25/2011 01:40 PM
Surr: 4-Bromofluorobenzene	159	57-134	%REC 50 7/25/2011 01:40 PM
Surr: Dibromofluoromethane	99.9	70-128	%REC 50 7/25/2011 01:40 PM
Surr: Toluene-d8	97.0	72-123	%REC 50 7/25/2011 01:40 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: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-75
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:17:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-002D		

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

**EPA 8015B(M)**

RunID: GC2_110726A	QC Batch: E11VS274	PrepDate: 7/21/2011	Analyst: <b>TP</b>
GRO	17	0.89	mg/Kg
Surr: Bromofluorobenzene (FID)	696	51-161	S %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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# ANALYTICAL RESULTS

Print Date: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-75
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:17:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-002G		

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_110725A	QC Batch: 74513	PrepDate: 7/25/2011	Analyst: CBR		
DRO	44000	500	mg/Kg	50	7/26/2011 08:19 AM
ORO	58000	500	mg/Kg	50	7/26/2011 08:19 AM
Surr: p-Terphenyl	0	63-152	SDO %REC	50	7/26/2011 08:19 AM

### SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

#### EPA 3550B

#### EPA 8270C

RunID: MS6_110728A	QC Batch: 74576	PrepDate: 7/27/2011	Analyst: JSD		
1,2,4-Trichlorobenzene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
1,2-Dichlorobenzene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
1,3-Dichlorobenzene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
1,4-Dichlorobenzene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2,4,5-Trichlorophenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2,4,6-Trichlorophenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2,4-Dichlorophenol	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
2,4-Dimethylphenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2,4-Dinitrophenol	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
2,4-Dinitrotoluene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2,6-Dinitrotoluene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2-Chloronaphthalene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2-Chlorophenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2-Methylnaphthalene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2-Methylphenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
2-Nitroaniline	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
2-Nitrophenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
3,3'-Dichlorobenzidine	ND	660000	µg/Kg	100	7/28/2011 01:40 PM
3-Nitroaniline	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
4,6-Dinitro-2-methylphenol	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
4-Bromophenyl-phenylether	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
4-Chloro-3-methylphenol	ND	660000	µg/Kg	100	7/28/2011 01:40 PM
4-Chloroaniline	ND	660000	µg/Kg	100	7/28/2011 01:40 PM
4-Chlorophenyl-phenylether	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
4-Methylphenol	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
4-Nitroaniline	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
4-Nitrophenol	ND	1600000	µg/Kg	100	7/28/2011 01:40 PM
Acenaphthene	ND	330000	µg/Kg	100	7/28/2011 01:40 PM
Acenaphthylene	ND	330000	µg/Kg	100	7/28/2011 01:40 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: 29-Jul-11

**CLIENT:** Mactec **Client Sample ID:** E-112-75  
**Lab Order:** 119094 **Collection Date:** 7/21/2011 2:17:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119094-002G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>			<b>EPA 8270C</b>		
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
Anthracene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzidine (M)	ND	1600000		µg/Kg	100	7/28/2011 01:40 PM
Benzo(a)anthracene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzo(a)pyrene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzo(b)fluoranthene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzo(g,h,i)perylene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzo(k)fluoranthene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Benzoic acid	ND	1600000		µg/Kg	100	7/28/2011 01:40 PM
Benzyl alcohol	ND	660000		µg/Kg	100	7/28/2011 01:40 PM
Bis(2-chloroethoxy)methane	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Bis(2-chloroethyl)ether	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Bis(2-chloroisopropyl)ether	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Bis(2-ethylhexyl)phthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Butylbenzylphthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Chrysene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Di-n-butylphthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Di-n-octylphthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Dibenz(a,h)anthracene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Dibenzofuran	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Diethylphthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Dimethylphthalate	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Fluoranthene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Fluorene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Hexachlorobenzene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Hexachlorobutadiene	ND	660000		µg/Kg	100	7/28/2011 01:40 PM
Hexachlorocyclopentadiene	ND	660000		µg/Kg	100	7/28/2011 01:40 PM
Hexachloroethane	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Indeno(1,2,3-cd)pyrene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Isophorone	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
N-Nitrosodi-n-propylamine	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
N-Nitrosodiphenylamine	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Naphthalene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Nitrobenzene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Pentachlorophenol	ND	1600000		µg/Kg	100	7/28/2011 01:40 PM
Phenanthrene	ND	330000		µg/Kg	100	7/28/2011 01:40 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-75
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 2:17:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-002G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>			<b>EPA 8270C</b>		
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
Phenol	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Pyrene	ND	330000		µg/Kg	100	7/28/2011 01:40 PM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	100	7/28/2011 01:40 PM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	100	7/28/2011 01:40 PM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	100	7/28/2011 01:40 PM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	100	7/28/2011 01:40 PM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	100	7/28/2011 01:40 PM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	100	7/28/2011 01:40 PM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	100	7/28/2011 01:40 PM
Surr: Phenol-d5	0	46-118	SDO	%REC	100	7/28/2011 01:40 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: 29-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-112-80
<b>Lab Order:</b> 119094	<b>Collection Date:</b> 7/21/2011 2:55:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119094-003C	

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

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1,1-Trichloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1,2,2-Tetrachloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1,2-Trichloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1-Dichloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1-Dichloroethene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,1-Dichloropropene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2,3-Trichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2,3-Trichloropropane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2,4-Trichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2,4-Trimethylbenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2-Dibromo-3-chloropropane	ND	440		µg/Kg	50	7/25/2011 01:22 PM
1,2-Dibromoethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2-Dichloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,2-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,3,5-Trimethylbenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,3-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,3-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
1,4-Dichlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
2,2-Dichloropropane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
2-Chlorotoluene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
4-Chlorotoluene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
4-Isopropyltoluene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Benzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Bromobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Bromodichloromethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Bromoform	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Bromomethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Carbon tetrachloride	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Chlorobenzene	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Chloroethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Chloroform	ND	220		µg/Kg	50	7/25/2011 01:22 PM
Chloromethane	ND	220		µg/Kg	50	7/25/2011 01:22 PM
cis-1,2-Dichloroethene	ND	220		µg/Kg	50	7/25/2011 01:22 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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**ANALYTICAL RESULTS**

Print Date: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-80
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:55:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-003C		

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

**EPA 8260B**

RunID: MS4_110725A	QC Batch: K11VS196	PrepDate: 7/21/2011	Analyst: SLL
cis-1,3-Dichloropropene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Di-isopropyl ether	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Dibromochloromethane	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Dibromomethane	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Dichlorodifluoromethane	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Ethyl Tert-butyl ether	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Ethylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Hexachlorobutadiene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Isopropylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
m,p-Xylene	ND	440	µg/Kg 50 7/25/2011 01:22 PM
Methylene chloride	ND	220	µg/Kg 50 7/25/2011 01:22 PM
MTBE	ND	220	µg/Kg 50 7/25/2011 01:22 PM
n-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
n-Propylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Naphthalene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
o-Xylene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
sec-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Styrene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Tert-amyl methyl ether	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Tert-Butanol	ND	4400	µg/Kg 50 7/25/2011 01:22 PM
tert-Butylbenzene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Tetrachloroethene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Toluene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
trans-1,2-Dichloroethene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Trichloroethene	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Trichlorofluoromethane	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Vinyl chloride	ND	220	µg/Kg 50 7/25/2011 01:22 PM
Surr: 1,2-Dichloroethane-d4	105	65-141	%REC 50 7/25/2011 01:22 PM
Surr: 4-Bromofluorobenzene	170	57-134	%REC 50 7/25/2011 01:22 PM
Surr: Dibromofluoromethane	104	70-128	%REC 50 7/25/2011 01:22 PM
Surr: Toluene-d8	100	72-123	%REC 50 7/25/2011 01:22 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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**ANALYTICAL RESULTS**  
 Print Date: 29-Jul-11

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<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-80
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:55:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-003D		

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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_110726A	QC Batch: E11VS274	PrepDate: 7/21/2011	Analyst: <b>TP</b>
GRO	29	0.84	mg/Kg
Surr: Bromofluorobenzene (FID)	1280	51-161	S %REC

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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: 29-Jul-11

**CLIENT:** Mactec **Client Sample ID:** E-112-80  
**Lab Order:** 119094 **Collection Date:** 7/21/2011 2:55:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119094-003G

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

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110725D	QC Batch: 74509			PrepDate: 7/25/2011	Analyst: <b>CBB</b>
Antimony	ND	2.0		mg/Kg	1 7/25/2011 03:48 PM
Arsenic	3.0	1.0		mg/Kg	1 7/25/2011 03:48 PM
Barium	54	1.0		mg/Kg	1 7/25/2011 03:48 PM
Beryllium	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Cadmium	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Chromium	12	1.0		mg/Kg	1 7/25/2011 03:48 PM
Cobalt	6.0	1.0		mg/Kg	1 7/25/2011 03:48 PM
Copper	7.3	2.0		mg/Kg	1 7/25/2011 03:48 PM
Lead	1.6	1.0		mg/Kg	1 7/25/2011 03:48 PM
Molybdenum	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Nickel	9.5	1.0		mg/Kg	1 7/25/2011 03:48 PM
Selenium	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Silver	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Thallium	ND	1.0		mg/Kg	1 7/25/2011 03:48 PM
Vanadium	21	1.0		mg/Kg	1 7/25/2011 03:48 PM
Zinc	21	1.0		mg/Kg	1 7/25/2011 03:48 PM

**DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID**

**LUFT**

**EPA 8015B(M)**

RunID: GC16_110725A	QC Batch: 74513			PrepDate: 7/25/2011	Analyst: <b>CBR</b>
DRO	48000	500		mg/Kg	50 7/26/2011 08:29 AM
ORO	61000	500		mg/Kg	50 7/26/2011 08:29 AM
Surr: p-Terphenyl	0	63-152	SDO	%REC	50 7/26/2011 08:29 AM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110726A	QC Batch: 74520			PrepDate: 7/25/2011	Analyst: <b>VV</b>
Mercury	ND	0.10		mg/Kg	1 7/26/2011 11:32 AM

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011	Analyst: <b>JSD</b>
1,2,4-Trichlorobenzene	ND	330000		µg/Kg	100 7/28/2011 02:06 PM
1,2-Dichlorobenzene	ND	330000		µg/Kg	100 7/28/2011 02:06 PM
1,3-Dichlorobenzene	ND	330000		µg/Kg	100 7/28/2011 02:06 PM
1,4-Dichlorobenzene	ND	330000		µg/Kg	100 7/28/2011 02:06 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: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-80
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:55:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-003G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>		<b>EPA 8270C</b>			
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
2,4,5-Trichlorophenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2,4,6-Trichlorophenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2,4-Dichlorophenol	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
2,4-Dimethylphenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2,4-Dinitrophenol	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
2,4-Dinitrotoluene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2,6-Dinitrotoluene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2-Chloronaphthalene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2-Chlorophenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2-Methylnaphthalene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2-Methylphenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
2-Nitroaniline	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
2-Nitrophenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
3,3'-Dichlorobenzidine	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
3-Nitroaniline	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
4,6-Dinitro-2-methylphenol	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
4-Bromophenyl-phenylether	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
4-Chloro-3-methylphenol	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
4-Chloroaniline	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
4-Chlorophenyl-phenylether	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
4-Methylphenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
4-Nitroaniline	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
4-Nitrophenol	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
Acenaphthene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Acenaphthylene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Anthracene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzidine (M)	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
Benzo(a)anthracene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzo(a)pyrene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzo(b)fluoranthene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzo(g,h,i)perylene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzo(k)fluoranthene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Benzoic acid	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
Benzyl alcohol	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
Bis(2-chloroethoxy)methane	ND	330000		µg/Kg	100	7/28/2011 02:06 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: 29-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-112-80
<b>Lab Order:</b>	119094	<b>Collection Date:</b>	7/21/2011 2:55:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119094-003G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>			<b>EPA 8270C</b>		
RunID: MS6_110728A	QC Batch: 74576			PrepDate: 7/27/2011		Analyst: JSD
Bis(2-chloroethyl)ether	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Bis(2-chloroisopropyl)ether	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Bis(2-ethylhexyl)phthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Butylbenzylphthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Chrysene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Di-n-butylphthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Di-n-octylphthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Dibenz(a,h)anthracene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Dibenzofuran	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Diethylphthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Dimethylphthalate	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Fluoranthene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Fluorene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Hexachlorobenzene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Hexachlorobutadiene	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
Hexachlorocyclopentadiene	ND	660000		µg/Kg	100	7/28/2011 02:06 PM
Hexachloroethane	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Indeno(1,2,3-cd)pyrene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Isophorone	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
N-Nitrosodi-n-propylamine	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
N-Nitrosodiphenylamine	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Naphthalene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Nitrobenzene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Pentachlorophenol	ND	1600000		µg/Kg	100	7/28/2011 02:06 PM
Phenanthrene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Phenol	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Pyrene	ND	330000		µg/Kg	100	7/28/2011 02:06 PM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	100	7/28/2011 02:06 PM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	100	7/28/2011 02:06 PM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	100	7/28/2011 02:06 PM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	100	7/28/2011 02:06 PM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	100	7/28/2011 02:06 PM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	100	7/28/2011 02:06 PM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	100	7/28/2011 02:06 PM
Surr: Phenol-d5	0	46-118	SDO	%REC	100	7/28/2011 02:06 PM

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



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**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

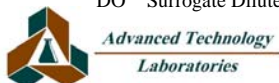
**TestCode: 6010\_S**

Sample ID: <b>MB-74509</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135302</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74509</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215175</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	0.461	1.0									

Sample ID: <b>LCS-74509</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135302</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74509</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215176</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.173	2.0	50.00	0	92.3	80	120				
Arsenic	45.939	1.0	50.00	0	91.9	80	120				
Barium	47.794	1.0	50.00	0	95.6	80	120				
Beryllium	47.191	1.0	50.00	0	94.4	80	120				
Cadmium	45.821	1.0	50.00	0	91.6	80	120				
Chromium	44.562	1.0	50.00	0	89.1	80	120				
Cobalt	47.845	1.0	50.00	0	95.7	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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

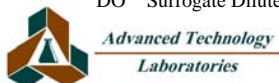
**TestCode: 6010\_S**

Sample ID: <b>LCS-74509</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/25/2011</b>		RunNo: <b>135302</b>	
Client ID: <b>LCSS</b>		Batch ID: <b>74509</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/25/2011</b>		SeqNo: <b>2215176</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	47.937	2.0	50.00	0	95.9	80	120				
Lead	47.096	1.0	50.00	0	94.2	80	120				
Molybdenum	49.615	1.0	50.00	0	99.2	80	120				
Nickel	47.727	1.0	50.00	0	95.5	80	120				
Selenium	43.352	1.0	50.00	0	86.7	80	120				
Silver	47.062	1.0	50.00	0	94.1	80	120				
Thallium	45.685	1.0	50.00	0	91.4	80	120				
Vanadium	47.437	1.0	50.00	0	94.9	80	120				
Zinc	46.705	1.0	50.00	0.4612	92.5	80	120				

Sample ID: <b>118919-007A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/25/2011</b>		RunNo: <b>135302</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74509</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/25/2011</b>		SeqNo: <b>2215178</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	103.766	2.0	125.0	0	83.0	32	105				
Arsenic	98.353	1.0	125.0	0	78.7	49	106				
Barium	228.814	1.0	125.0	115.3	90.8	31	133				
Beryllium	111.642	1.0	125.0	0	89.3	56	106				
Cadmium	108.129	1.0	125.0	0.3535	86.2	51	103				
Chromium	114.288	1.0	125.0	5.679	86.9	45	114				
Cobalt	121.428	1.0	125.0	7.258	91.3	52	106				
Copper	122.531	2.0	125.0	0	98.0	54	125				
Lead	111.082	1.0	125.0	2.664	86.7	34	126				
Molybdenum	114.141	1.0	125.0	0	91.3	54	106				
Nickel	109.725	1.0	125.0	0.8731	87.1	45	111				
Selenium	104.222	1.0	125.0	0	83.4	47	104				
Silver	116.600	1.0	125.0	0	93.3	56	112				
Thallium	81.607	1.0	125.0	0	65.3	46	101				
Vanadium	162.211	1.0	125.0	45.78	93.1	54	114				
Zinc	153.966	1.0	125.0	49.83	83.3	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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

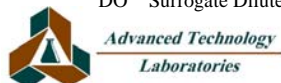
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>118919-007A-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/25/2011</b>		RunNo: <b>135302</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74509</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/25/2011</b>		SeqNo: <b>2215179</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	102.841	2.0	125.0	0	82.3	32	105	103.8	0.896	20	
Arsenic	99.365	1.0	125.0	0	79.5	49	106	98.35	1.02	20	
Barium	200.372	1.0	125.0	115.3	68.1	31	133	228.8	13.3	20	
Beryllium	110.176	1.0	125.0	0	88.1	56	106	111.6	1.32	20	
Cadmium	105.839	1.0	125.0	0.3535	84.4	51	103	108.1	2.14	20	
Chromium	110.457	1.0	125.0	5.679	83.8	45	114	114.3	3.41	20	
Cobalt	117.514	1.0	125.0	7.258	88.2	52	106	121.4	3.28	20	
Copper	118.964	2.0	125.0	0	95.2	54	125	122.5	2.95	20	
Lead	109.823	1.0	125.0	2.664	85.7	34	126	111.1	1.14	20	
Molybdenum	113.189	1.0	125.0	0	90.6	54	106	114.1	0.838	20	
Nickel	107.281	1.0	125.0	0.8731	85.1	45	111	109.7	2.25	20	
Selenium	103.349	1.0	125.0	0	82.7	47	104	104.2	0.841	20	
Silver	113.600	1.0	125.0	0	90.9	56	112	116.6	2.61	20	
Thallium	87.139	1.0	125.0	0	69.7	46	101	81.61	6.56	20	
Vanadium	146.124	1.0	125.0	45.78	80.3	54	114	162.2	10.4	20	
Zinc	140.185	1.0	125.0	49.83	72.3	28	125	154.0	9.37	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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-74520</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135330</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74520</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2215636</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-74520</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135330</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74520</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2215637</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.878 0.10 0.8300 0 106 80 120

Sample ID: <b>119094-003G-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135330</b>						
Client ID: <b>E-112-80</b>	Batch ID: <b>74520</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2215638</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

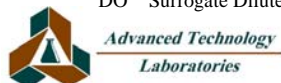
Mercury 0.823 0.10 0.8300 0 99.1 70 130

Sample ID: <b>119094-003G-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135330</b>						
Client ID: <b>E-112-80</b>	Batch ID: <b>74520</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2215639</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.822 0.10 0.8300 0 99.0 70 130 0.8229 0.129 20

**Qualifiers:**

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



**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>MB-74513</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215380</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	71.990		80.00		90.0	63	152				

Sample ID: <b>LCS-74513</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215381</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	938.900	10	1000	0	93.9	76	139				
Surr: p-Terphenyl	74.630		80.00		93.3	63	152				

Sample ID: <b>119065-001GMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215382</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	832.320	10	1000	0	83.2	60	158				
Surr: p-Terphenyl	65.260		80.00		81.6	63	152				

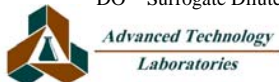
Sample ID: <b>119065-001GMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215383</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	840.690	10	1000	0	84.1	60	158	832.3	1.00	20	
Surr: p-Terphenyl	64.110		80.00		80.1	63	152		0	0	

Sample ID: <b>119111-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215399</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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>119111-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>	Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215399</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

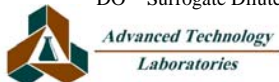
DRO	951.900	10	1000	0	95.2	60	158				
Surr: p-Terphenyl	74.710		80.00		93.4	63	152				

Sample ID: <b>119111-002AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/25/2011</b>	RunNo: <b>135317</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74513</b>	TestNo: <b>EPA 8015B(M LUFT</b>	Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2215400</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	956.600	10	1000	0	95.7	60	158	951.9	0.493	20	
Surr: p-Terphenyl	74.370		80.00		93.0	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   |  |



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**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>E110726LC1</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216092</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.689	1.0	5.000	0	93.8	70	130				
Surr: Bromofluorobenzene (FID)	118.212		100.0		118	51	161				

Sample ID: <b>E110726MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216093</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.623	1.0	5.000	0	92.5	41	146				
Surr: Bromofluorobenzene (FID)	114.698		100.0		115	51	161				

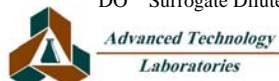
Sample ID: <b>E110726MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216094</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.613	1.0	5.000	0	92.3	41	146	4.623	0.217	20	
Surr: Bromofluorobenzene (FID)	123.354		100.0		123	51	161		0	0	

Sample ID: <b>E110726MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216095</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)	86.392		100.0		86.4	51	161				

Sample ID: <b>119099-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216106</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.396	1.0	5.000	0.3600	80.7	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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

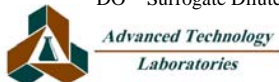
**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>119099-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216106</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	126.109		100.0		126	51	161				

Sample ID: <b>119099-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135360</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS274</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/26/2011</b>	SeqNo: <b>2216107</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.482	1.0	5.000	0.3600	82.4	41	146	4.396	1.94	20	
Surr: Bromofluorobenzene (FID)	126.627		100.0		127	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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**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

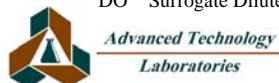
Sample ID: <b>K110725LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135313</b>	
Client ID: <b>LCSS</b>		Batch ID: <b>K11VS196</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>				SeqNo: <b>2216476</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	46.080	5.0	50.00	0	92.2	70	130				
Benzene	93.170	5.0	100.0	0	93.2	70	130				
Chlorobenzene	49.430	5.0	50.00	0	98.9	70	130				
MTBE	58.120	5.0	50.00	0	116	70	130				
Toluene	95.480	5.0	100.0	0	95.5	70	130				
Trichloroethene	48.780	5.0	50.00	0	97.6	70	130				
Surr: 1,2-Dichloroethane-d4	54.960		50.00		110	65	141				
Surr: 4-Bromofluorobenzene	45.890		50.00		91.8	57	134				
Surr: Dibromofluoromethane	51.140		50.00		102	70	128				
Surr: Toluene-d8	47.800		50.00		95.6	72	123				

Sample ID: <b>K110725MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135313</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS196</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>				SeqNo: <b>2216477</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	49.370	5.0	50.00	0	98.7	70	130				
Benzene	98.430	5.0	100.0	0	98.4	70	130				
Chlorobenzene	50.870	5.0	50.00	0	102	70	130				
MTBE	60.900	5.0	50.00	0	122	70	130				
Toluene	100.180	5.0	100.0	0	100	70	130				
Trichloroethene	50.620	5.0	50.00	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	56.100		50.00		112	65	141				
Surr: 4-Bromofluorobenzene	45.120		50.00		90.2	57	134				
Surr: Dibromofluoromethane	52.580		50.00		105	70	128				
Surr: Toluene-d8	48.800		50.00		97.6	72	123				

Sample ID: <b>K110725MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135313</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>K11VS196</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>				SeqNo: <b>2216478</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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

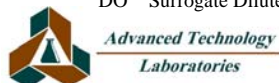
**TestCode: 8260\_S\_5035**

Sample ID: <b>K110725MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135313</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>K11VS196</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>				SeqNo: <b>2216478</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	49.750	5.0	50.00	0	99.5	70	130	49.37	0.767	20	
Benzene	99.990	5.0	100.0	0	100	70	130	98.43	1.57	20	
Chlorobenzene	51.080	5.0	50.00	0	102	70	130	50.87	0.412	20	
MTBE	64.250	5.0	50.00	0	128	70	130	60.90	5.35	20	
Toluene	101.720	5.0	100.0	0	102	70	130	100.2	1.53	20	
Trichloroethene	50.580	5.0	50.00	0	101	70	130	50.62	0.0791	20	
Surr: 1,2-Dichloroethane-d4	55.010		50.00		110	65	141		0	0	
Surr: 4-Bromofluorobenzene	44.630		50.00		89.3	57	134		0	0	
Surr: Dibromofluoromethane	52.240		50.00		104	70	128		0	0	
Surr: Toluene-d8	48.520		50.00		97.0	72	123		0	0	

Sample ID: <b>K110725MB1</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135313</b>	
Client ID: <b>PBS</b>		Batch ID: <b>K11VS196</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>				SeqNo: <b>2216479</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: 119094

Project: METRO WESTSIDE EXTENSION, 4953-10-1

# ANALYTICAL QC SUMMARY REPORT

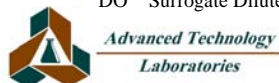
TestCode: 8260\_S\_5035

Sample ID: <b>K110725MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135313</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS196</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2216479</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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>K110725MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135313</b>						
Client ID: <b>PBS</b>	Batch ID: <b>K11VS196</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>7/25/2011</b>	SeqNo: <b>2216479</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	58.380		50.00		117	65	141				
Surr: 4-Bromofluorobenzene	44.580		50.00		89.2	57	134				
Surr: Dibromofluoromethane	53.580		50.00		107	70	128				
Surr: Toluene-d8	47.640		50.00		95.3	72	123				

**Qualifiers:**

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



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**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

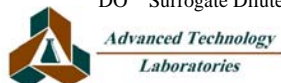
**TestCode: 8270\_S\_FULL**

Sample ID: <b>MB-74576</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>
Client ID: <b>PBS</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216987</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330									
1,2-Dichlorobenzene	ND	330									
1,3-Dichlorobenzene	ND	330									
1,4-Dichlorobenzene	ND	330									
2,4,5-Trichlorophenol	ND	330									
2,4,6-Trichlorophenol	ND	330									
2,4-Dichlorophenol	ND	1600									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3'-Dichlorobenzidine	ND	660									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	660									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									
Acenaphthylene	ND	330									
Anthracene	ND	330									

**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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270\_S\_FULL**

Sample ID: <b>MB-74576</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216987</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzidine (M)	ND	1600									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	330									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	330									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	660									
Hexachlorocyclopentadiene	ND	660									
Hexachloroethane	ND	330									
Indeno(1,2,3-cd)pyrene	ND	330									
Isophorone	ND	330									
N-Nitrosodi-n-propylamine	ND	330									
N-Nitrosodiphenylamine	ND	330									

**Qualifiers:**

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



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**CLIENT:** Mactec  
**Work Order:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

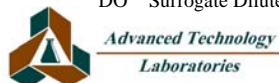
**TestCode: 8270\_S\_FULL**

Sample ID: <b>MB-74576</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216987</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	330									
Nitrobenzene	ND	330									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2545.333		3330		76.4	45	105				
Surr: 2,4,6-Tribromophenol	2541.333		3330		76.3	41	129				
Surr: 2-Chlorophenol-d4	2631.000		3330		79.0	55	108				
Surr: 2-Fluorobiphenyl	3120.667		3330		93.7	56	114				
Surr: 2-Fluorophenol	2730.333		3330		82.0	50	108				
Surr: 4-Terphenyl-d14	3271.667		3330		98.2	59	141				
Surr: Nitrobenzene-d5	3117.000		3330		93.6	45	114				
Surr: Phenol-d5	2801.000		3330		84.1	46	118				

Sample ID: <b>LCS-74576</b>	SampType: <b>LCS</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216988</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2811.667	330	3330	0	84.4	67	107				
1,4-Dichlorobenzene	2541.333	330	3330	0	76.3	64	99				
2,4-Dinitrotoluene	3304.667	330	3330	0	99.2	81	122				
2-Chlorophenol	2541.333	330	3330	0	76.3	62	112				
4-Chloro-3-methylphenol	3250.333	660	3330	0	97.6	64	138				
4-Nitrophenol	3703.000	1600	3330	0	111	60	142				
Acenaphthene	2900.333	330	3330	0	87.1	70	116				
N-Nitrosodi-n-propylamine	3060.667	330	3330	0	91.9	73	115				
Pentachlorophenol	2716.667	1600	3330	0	81.6	59	135				
Phenol	2679.667	330	3330	0	80.5	61	120				
Pyrene	2991.333	330	3330	0	89.8	75	117				

**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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

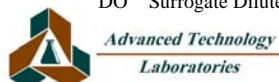
**TestCode: 8270\_S\_FULL**

Sample ID: <b>LCS-74576</b>		SampType: <b>LCS</b>		TestCode: <b>8270_S_FULL</b> Units: <b>µg/Kg</b>		Prep Date: <b>7/27/2011</b>		RunNo: <b>135416</b>			
Client ID: <b>LCSS</b>		Batch ID: <b>74576</b>		TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>		SeqNo: <b>2216988</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1,2-Dichlorobenzene-d4	2378.000		3330		71.4	45	105				
Surr: 2,4,6-Tribromophenol	2890.333		3330		86.8	41	129				
Surr: 2-Chlorophenol-d4	2482.667		3330		74.6	55	108				
Surr: 2-Fluorobiphenyl	2696.667		3330		81.0	56	114				
Surr: 2-Fluorophenol	2548.000		3330		76.5	50	108				
Surr: 4-Terphenyl-d14	2786.000		3330		83.7	59	141				
Surr: Nitrobenzene-d5	2847.667		3330		85.5	45	114				
Surr: Phenol-d5	2685.000		3330		80.6	46	118				

Sample ID: <b>119132-005AMS</b>		SampType: <b>MS</b>		TestCode: <b>8270_S_FULL</b> Units: <b>µg/Kg</b>		Prep Date: <b>7/27/2011</b>		RunNo: <b>135416</b>			
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74576</b>		TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>		SeqNo: <b>2216988</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2687.000	330	3330	0	80.7	62	109				
1,4-Dichlorobenzene	2484.333	330	3330	0	74.6	57	99				
2,4-Dinitrotoluene	3217.000	330	3330	0	96.6	76	126				
2-Chlorophenol	2419.000	330	3330	0	72.6	52	120				
4-Chloro-3-methylphenol	3193.667	660	3330	0	95.9	63	137				
4-Nitrophenol	2909.000	1600	3330	0	87.4	52	144				
Acenaphthene	2857.333	330	3330	0	85.8	61	121				
N-Nitrosodi-n-propylamine	3051.667	330	3330	0	91.6	67	116				
Pentachlorophenol	1569.667	1600	3330	0	47.1	47	143				
Phenol	2612.333	330	3330	0	78.4	54	126				
Pyrene	3091.000	330	3330	0	92.8	68	121				
Surr: 1,2-Dichlorobenzene-d4	2314.333		3330		69.5	45	105				
Surr: 2,4,6-Tribromophenol	2618.000		3330		78.6	41	129				
Surr: 2-Chlorophenol-d4	2342.000		3330		70.3	55	108				
Surr: 2-Fluorobiphenyl	2628.333		3330		78.9	56	114				
Surr: 2-Fluorophenol	2407.333		3330		72.3	50	108				
Surr: 4-Terphenyl-d14	2826.667		3330		84.9	59	141				

**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:** 119094  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

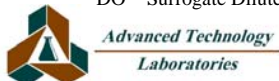
**TestCode: 8270\_S\_FULL**

Sample ID: <b>119132-005AMS</b>	SampType: <b>MS</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216989</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	2823.000		3330		84.8	45	114				
Surr: Phenol-d5	2583.000		3330		77.6	46	118				

Sample ID: <b>119132-005AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>7/27/2011</b>	RunNo: <b>135416</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74576</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>7/28/2011</b>	SeqNo: <b>2216990</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2647.333	330	3330	0	79.5	62	109	2687	1.49	20	
1,4-Dichlorobenzene	2459.000	330	3330	0	73.8	57	99	2484	1.02	20	
2,4-Dinitrotoluene	3232.333	330	3330	0	97.1	76	126	3217	0.476	20	
2-Chlorophenol	2390.333	330	3330	0	71.8	52	120	2419	1.19	20	
4-Chloro-3-methylphenol	3049.000	660	3330	0	91.6	63	137	3194	4.63	20	
4-Nitrophenol	2709.000	1600	3330	0	81.4	52	144	2909	7.12	20	
Acenaphthene	2777.333	330	3330	0	83.4	61	121	2857	2.84	20	
N-Nitrosodi-n-propylamine	2985.667	330	3330	0	89.7	67	116	3052	2.19	20	
Pentachlorophenol	1466.333	1600	3330	0	44.0	47	143	1570	0	20	S
Phenol	2545.333	330	3330	0	76.4	54	126	2612	2.60	20	
Pyrene	3033.667	330	3330	0	91.1	68	121	3091	1.87	20	
Surr: 1,2-Dichlorobenzene-d4	2254.667		3330		67.7	45	105		0	0	
Surr: 2,4,6-Tribromophenol	2561.000		3330		76.9	41	129		0	0	
Surr: 2-Chlorophenol-d4	2317.667		3330		69.6	55	108		0	0	
Surr: 2-Fluorobiphenyl	2597.333		3330		78.0	56	114		0	0	
Surr: 2-Fluorophenol	2363.667		3330		71.0	50	108		0	0	
Surr: 4-Terphenyl-d14	2747.333		3330		82.5	59	141		0	0	
Surr: Nitrobenzene-d5	2718.000		3330		81.6	45	114		0	0	
Surr: Phenol-d5	2492.000		3330		74.8	46	118		0	0	

**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

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

Quote #: 201106374 Quote #: 1476  
 Logged By: [Signature] Date: 7/22/11  
 NOTE: Please include your Quote No. to ensure proper pricing of your project.

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

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

Project Name: METRO WESTSIDE EXTENSION Project #: 4953-10-1561 Sampler: [Signature]  
 Relinquished by: [Signature] Date: 7-22-11 Time: 7:00 Received by: [Signature] Date: 7/22/11 Time: 6:00  
 Relinquished by: [Signature] Date: 7/22/11 Time: 0905 Received by: [Signature] Date: 7/22/11 Time: 905  
 Relinquished by: [Signature] Date: 7/22/11 Time: 2:18 Received by: [Signature] Date: 7/22/11 Time: 12:18

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: Matt Fraychineaud Date: 7/22/11  
[Signature]

Special Instructions/Comments:  
Send Report To: MATT FRAYCHINEAUD  
 Attn: MATT FRAYCHINEAUD  
 Co: \_\_\_\_\_  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**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 Description	Sample I.D. / Location		Date		Time
			Sample I.D.	Location	Date	Time	
119074	01		E-112-70		7/21	13:35	
	02		E-112-75		7/21	14:17	
	03		E-112-80		7/21	14:55	
	04		E-112-40		7/21	10:40	
	05		E-112-50		7/21	11:30	
	06		E-112-60		7/21	12:30	

Circle or Add Analysis(es) Requested:  
 8081A (Pesticides)   
 8082 (PCB)   
 8270C (Nitrates)   
 8010B (Total Metal)   
 8015B (GRO)   
 8015B (DRO)   
 TITLE 22 / CAM 17 (6010 / 7000)   
 TAT # Type: E 7 TV  
E 7 TV  
E 7 TV  
1 T  
1 T  
1 T

**QA/QC**  
 RTNE   
 CT   
 Legal   
 SWRCB   
 Logcode   
 OTHER   
 REMARKS

**Container(s)**  
 SPECIFY APPROPRIATE MATRIX  
 AQUEOUS  
 STORMWATER  
 WASTEWATER  
 GROUND WATER  
 DRINKING WATER  
 SOIL  
 SOLID  
 SEDIMENT

**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>

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

Rev. 2010-0325

August 11, 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.: 119269

RE: METRO WESTSIDE EXTENSION, 4953-10-1


Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on August 04, 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:** 119269

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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) DRO/ORO

Samples 119269-001G, 119269-002G and 119269-003G, surrogate diluted out.

Analytical Comments for EPA 8260B

Samples 119269-001C, 119269-002C and 119269-003C, dilution was necessary due to sample matrix.

Analytical Comments for EPA 8270C

Samples 119269-001G, 119269-002G and 119269-003G, dilution was necessary due to high concentrations of non-target extractable analytes.

Samples 119269-001G, 119269-002G and 119269-003G, surrogates diluted out.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-75  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 11:56:00 AM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-001C

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

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_110805A	QC Batch:	T11VS139	PrepDate:	8/3/2011	Analyst:	SLL
1,1,1,2-Tetrachloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1,1-Trichloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1,2,2-Tetrachloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1,2-Trichloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1-Dichloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1-Dichloroethene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,1-Dichloropropene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2,3-Trichlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2,3-Trichloropropane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2,4-Trichlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2,4-Trimethylbenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2-Dibromo-3-chloropropane	ND	450	µg/Kg	50	8/5/2011 12:18 PM		
1,2-Dibromoethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2-Dichlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2-Dichloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,2-Dichloropropane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,3,5-Trimethylbenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,3-Dichlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,3-Dichloropropane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
1,4-Dichlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
2,2-Dichloropropane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
2-Chlorotoluene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
4-Chlorotoluene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
4-Isopropyltoluene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Benzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Bromobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Bromodichloromethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Bromoform	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Bromomethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Carbon tetrachloride	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Chlorobenzene	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Chloroethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Chloroform	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
Chloromethane	ND	230	µg/Kg	50	8/5/2011 12:18 PM		
cis-1,2-Dichloroethene	ND	230	µg/Kg	50	8/5/2011 12:18 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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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-75
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 11:56:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-001C		

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

**EPA 8260B**

RunID: MS5_110805A	QC Batch: T11VS139	PrepDate: 8/3/2011	Analyst: SLL
cis-1,3-Dichloropropene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Di-isopropyl ether	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Dibromochloromethane	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Dibromomethane	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Dichlorodifluoromethane	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Ethyl Tert-butyl ether	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Ethylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Hexachlorobutadiene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Isopropylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
m,p-Xylene	ND	450	µg/Kg 50 8/5/2011 12:18 PM
Methylene chloride	ND	230	µg/Kg 50 8/5/2011 12:18 PM
MTBE	ND	230	µg/Kg 50 8/5/2011 12:18 PM
n-Butylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
n-Propylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Naphthalene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
o-Xylene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
sec-Butylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Styrene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Tert-amyl methyl ether	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Tert-Butanol	ND	4500	µg/Kg 50 8/5/2011 12:18 PM
tert-Butylbenzene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Tetrachloroethene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Toluene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
trans-1,2-Dichloroethene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Trichloroethene	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Trichlorofluoromethane	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Vinyl chloride	ND	230	µg/Kg 50 8/5/2011 12:18 PM
Surr: 1,2-Dichloroethane-d4	91.7	65-141	%REC 50 8/5/2011 12:18 PM
Surr: 4-Bromofluorobenzene	105	57-134	%REC 50 8/5/2011 12:18 PM
Surr: Dibromofluoromethane	92.5	70-128	%REC 50 8/5/2011 12:18 PM
Surr: Toluene-d8	90.0	72-123	%REC 50 8/5/2011 12:18 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-75
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 11:56:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-001D		

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

**EPA 8015B(M)**

RunID: GC2_110805A	QC Batch: E11VS289	PrepDate: 8/3/2011	Analyst: TP		
GRO	1.1	0.82	mg/Kg	1	8/5/2011 02:53 PM
Surr: Bromofluorobenzene (FID)	112	51-161	%REC	1	8/5/2011 02:53 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-75
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 11:56:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-001G		

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_110808A	QC Batch: 74778	PrepDate: 8/5/2011	Analyst: CBR		
DRO	15000	50	mg/Kg	5	8/8/2011 12:07 PM
ORO	20000	50	mg/Kg	5	8/8/2011 12:07 PM
Surr: p-Terphenyl	0	63-152	SDO %REC	5	8/8/2011 12:07 PM

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

### EPA 3550B

### EPA 8270C

RunID: MS 13_110805A	QC Batch: 74772	PrepDate: 8/5/2011	Analyst: JSD		
1,2,4-Trichlorobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
1,2-Dichlorobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
1,3-Dichlorobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
1,4-Dichlorobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2,4,5-Trichlorophenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2,4,6-Trichlorophenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2,4-Dichlorophenol	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
2,4-Dimethylphenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2,4-Dinitrophenol	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
2,4-Dinitrotoluene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2,6-Dinitrotoluene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2-Chloronaphthalene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2-Chlorophenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2-Methylnaphthalene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2-Methylphenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
2-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
2-Nitrophenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
3,3'-Dichlorobenzidine	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
3-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
4,6-Dinitro-2-methylphenol	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
4-Bromophenyl-phenylether	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
4-Chloro-3-methylphenol	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
4-Chloroaniline	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
4-Chlorophenyl-phenylether	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
4-Methylphenol	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
4-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
4-Nitrophenol	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
Acenaphthene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Acenaphthylene	ND	160000	µg/Kg	100	8/5/2011 06:47 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: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-75  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 11:56:00 AM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-001G

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

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID: MS 13_110805A	QC Batch: 74772	PrepDate: 8/5/2011	Analyst: JSD		
Anthracene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzidine (M)	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
Benzo(a)anthracene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzo(a)pyrene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzo(b)fluoranthene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzo(g,h,i)perylene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzo(k)fluoranthene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Benzoic acid	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
Benzyl alcohol	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
Bis(2-chloroethoxy)methane	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Bis(2-chloroethyl)ether	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Bis(2-chloroisopropyl)ether	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Bis(2-ethylhexyl)phthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Butylbenzylphthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Chrysene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Di-n-butylphthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Di-n-octylphthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Dibenz(a,h)anthracene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Dibenzofuran	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Diethylphthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Dimethylphthalate	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Fluoranthene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Fluorene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Hexachlorobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Hexachlorobutadiene	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
Hexachlorocyclopentadiene	ND	330000	µg/Kg	100	8/5/2011 06:47 PM
Hexachloroethane	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Indeno(1,2,3-cd)pyrene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Isophorone	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
N-Nitrosodi-n-propylamine	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
N-Nitrosodiphenylamine	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Naphthalene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Nitrobenzene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM
Pentachlorophenol	ND	820000	µg/Kg	100	8/5/2011 06:47 PM
Phenanthrene	ND	160000	µg/Kg	100	8/5/2011 06:47 PM

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



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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**  
 Print Date: 11-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-113-75
<b>Lab Order:</b> 119269	<b>Collection Date:</b> 8/3/2011 11:56:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119269-001G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
<b>EPA 3550B</b>			<b>EPA 8270C</b>			
RunID: MS 13_110805A	QC Batch: 74772			PrepDate: 8/5/2011		Analyst: JSD
Phenol	ND	160000		µg/Kg	100	8/5/2011 06:47 PM
Pyrene	ND	160000		µg/Kg	100	8/5/2011 06:47 PM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	100	8/5/2011 06:47 PM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	100	8/5/2011 06:47 PM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	100	8/5/2011 06:47 PM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	100	8/5/2011 06:47 PM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	100	8/5/2011 06:47 PM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	100	8/5/2011 06:47 PM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	100	8/5/2011 06:47 PM
Surr: Phenol-d5	0	46-118	SDO	%REC	100	8/5/2011 06:47 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: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-80  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 12:25:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-002C

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

**EPA 8260B**

RunID:	MS5_110805A	QC Batch:	T11VS139	PrepDate:	8/3/2011	Analyst:	SLL
1,1,1,2-Tetrachloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1,1-Trichloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1,2,2-Tetrachloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1,2-Trichloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1-Dichloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1-Dichloroethene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,1-Dichloropropene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2,3-Trichlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2,3-Trichloropropane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2,4-Trichlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2,4-Trimethylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2-Dibromo-3-chloropropane	ND	410	µg/Kg	50	8/5/2011 12:37 PM		
1,2-Dibromoethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2-Dichlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2-Dichloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,2-Dichloropropane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,3,5-Trimethylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,3-Dichlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,3-Dichloropropane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
1,4-Dichlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
2,2-Dichloropropane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
2-Chlorotoluene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
4-Chlorotoluene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
4-Isopropyltoluene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Benzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Bromobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Bromodichloromethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Bromoform	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Bromomethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Carbon tetrachloride	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Chlorobenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Chloroethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Chloroform	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
Chloromethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM		
cis-1,2-Dichloroethene	ND	200	µg/Kg	50	8/5/2011 12:37 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-80
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 12:25:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-002C		

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

**EPA 8260B**

RunID: MS5_110805A	QC Batch: T11VS139	PrepDate: 8/3/2011	Analyst: SLL		
cis-1,3-Dichloropropene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Di-isopropyl ether	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Dibromochloromethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Dibromomethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Dichlorodifluoromethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Ethyl Tert-butyl ether	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Ethylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Hexachlorobutadiene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Isopropylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
m,p-Xylene	ND	410	µg/Kg	50	8/5/2011 12:37 PM
Methylene chloride	ND	200	µg/Kg	50	8/5/2011 12:37 PM
MTBE	ND	200	µg/Kg	50	8/5/2011 12:37 PM
n-Butylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
n-Propylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Naphthalene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
o-Xylene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
sec-Butylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Styrene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Tert-amyl methyl ether	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Tert-Butanol	ND	4100	µg/Kg	50	8/5/2011 12:37 PM
tert-Butylbenzene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Tetrachloroethene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Toluene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
trans-1,2-Dichloroethene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Trichloroethene	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Trichlorofluoromethane	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Vinyl chloride	ND	200	µg/Kg	50	8/5/2011 12:37 PM
Surr: 1,2-Dichloroethane-d4	86.5	65-141	%REC	50	8/5/2011 12:37 PM
Surr: 4-Bromofluorobenzene	104	57-134	%REC	50	8/5/2011 12:37 PM
Surr: Dibromofluoromethane	96.5	70-128	%REC	50	8/5/2011 12:37 PM
Surr: Toluene-d8	91.1	72-123	%REC	50	8/5/2011 12:37 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-80
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 12:25:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-002D		

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

**EPA 8015B(M)**

RunID: GC2_110805A	QC Batch: E11VS289	PrepDate: 8/3/2011	Analyst: TP		
GRO	1.3	0.82	mg/Kg	1	8/5/2011 03:09 PM
Surr: Bromofluorobenzene (FID)	134	51-161	%REC	1	8/5/2011 03:09 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: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-80  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 12:25:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-002G

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_110808A	QC Batch: 74778				PrepDate: 8/5/2011	Analyst: CBR
DRO	14000	50		mg/Kg	5	8/8/2011 12:19 PM
ORO	20000	50		mg/Kg	5	8/8/2011 12:19 PM
Surr: p-Terphenyl	0	63-152	SDO	%REC	5	8/8/2011 12:19 PM

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID: MS 13_110805A	QC Batch: 74772				PrepDate: 8/5/2011	Analyst: JSD
1,2,4-Trichlorobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
1,2-Dichlorobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
1,3-Dichlorobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
1,4-Dichlorobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2,4,5-Trichlorophenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2,4,6-Trichlorophenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2,4-Dichlorophenol	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
2,4-Dimethylphenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2,4-Dinitrophenol	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
2,4-Dinitrotoluene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2,6-Dinitrotoluene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2-Chloronaphthalene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2-Chlorophenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2-Methylnaphthalene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2-Methylphenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
2-Nitroaniline	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
2-Nitrophenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
3,3'-Dichlorobenzidine	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
3-Nitroaniline	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
4,6-Dinitro-2-methylphenol	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
4-Bromophenyl-phenylether	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
4-Chloro-3-methylphenol	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
4-Chloroaniline	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
4-Chlorophenyl-phenylether	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
4-Methylphenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
4-Nitroaniline	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
4-Nitrophenol	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
Acenaphthene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Acenaphthylene	ND	160000		µg/Kg	100	8/5/2011 07:14 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-80
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 12:25:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-002G		

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

**EPA 3550B**

**EPA 8270C**

RunID: MS 13_110805A	QC Batch: 74772			PrepDate: 8/5/2011		Analyst: JSD
Anthracene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzidine (M)	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
Benzo(a)anthracene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzo(a)pyrene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzo(b)fluoranthene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzo(g,h,i)perylene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzo(k)fluoranthene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Benzoic acid	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
Benzyl alcohol	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
Bis(2-chloroethoxy)methane	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Bis(2-chloroethyl)ether	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Bis(2-chloroisopropyl)ether	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Bis(2-ethylhexyl)phthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Butylbenzylphthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Chrysene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Di-n-butylphthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Di-n-octylphthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Dibenz(a,h)anthracene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Dibenzofuran	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Diethylphthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Dimethylphthalate	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Fluoranthene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Fluorene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Hexachlorobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Hexachlorobutadiene	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
Hexachlorocyclopentadiene	ND	330000		µg/Kg	100	8/5/2011 07:14 PM
Hexachloroethane	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Indeno(1,2,3-cd)pyrene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Isophorone	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
N-Nitrosodi-n-propylamine	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
N-Nitrosodiphenylamine	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Naphthalene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Nitrobenzene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Pentachlorophenol	ND	820000		µg/Kg	100	8/5/2011 07:14 PM
Phenanthrene	ND	160000		µg/Kg	100	8/5/2011 07:14 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: 11-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-113-80
<b>Lab Order:</b> 119269	<b>Collection Date:</b> 8/3/2011 12:25:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119269-002G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS</b>						
	<b>EPA 3550B</b>			<b>EPA 8270C</b>		
RunID: MS 13_110805A	QC Batch: 74772			PrepDate: 8/5/2011		Analyst: JSD
Phenol	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Pyrene	ND	160000		µg/Kg	100	8/5/2011 07:14 PM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	100	8/5/2011 07:14 PM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	100	8/5/2011 07:14 PM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	100	8/5/2011 07:14 PM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	100	8/5/2011 07:14 PM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	100	8/5/2011 07:14 PM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	100	8/5/2011 07:14 PM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	100	8/5/2011 07:14 PM
Surr: Phenol-d5	0	46-118	SDO	%REC	100	8/5/2011 07:14 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: 11-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-113-85
<b>Lab Order:</b> 119269	<b>Collection Date:</b> 8/3/2011 12:52:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119269-003C	

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

**EPA 8260B**

RunID: MS5_110805A	QC Batch: T11VS139	PrepDate: 8/3/2011	Analyst: SLL
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1,1-Trichloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1,2,2-Tetrachloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1,2-Trichloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1-Dichloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1-Dichloroethene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,1-Dichloropropene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2,3-Trichlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2,3-Trichloropropane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2,4-Trichlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2,4-Trimethylbenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2-Dibromo-3-chloropropane	ND	430		µg/Kg	50	8/5/2011 12:55 PM
1,2-Dibromoethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2-Dichlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2-Dichloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,2-Dichloropropane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,3,5-Trimethylbenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,3-Dichlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,3-Dichloropropane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
1,4-Dichlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
2,2-Dichloropropane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
2-Chlorotoluene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
4-Chlorotoluene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
4-Isopropyltoluene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Benzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Bromobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Bromodichloromethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Bromoform	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Bromomethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Carbon tetrachloride	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Chlorobenzene	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Chloroethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Chloroform	ND	210		µg/Kg	50	8/5/2011 12:55 PM
Chloromethane	ND	210		µg/Kg	50	8/5/2011 12:55 PM
cis-1,2-Dichloroethene	ND	210		µg/Kg	50	8/5/2011 12:55 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-85
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 12:52:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-003C		

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

**EPA 8260B**

RunID: MS5_110805A	QC Batch: T11VS139	PrepDate: 8/3/2011	Analyst: SLL
cis-1,3-Dichloropropene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Di-isopropyl ether	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Dibromochloromethane	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Dibromomethane	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Dichlorodifluoromethane	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Ethyl Tert-butyl ether	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Ethylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Hexachlorobutadiene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Isopropylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
m,p-Xylene	ND	430	µg/Kg 50 8/5/2011 12:55 PM
Methylene chloride	ND	210	µg/Kg 50 8/5/2011 12:55 PM
MTBE	ND	210	µg/Kg 50 8/5/2011 12:55 PM
n-Butylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
n-Propylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Naphthalene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
o-Xylene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
sec-Butylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Styrene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Tert-amyl methyl ether	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Tert-Butanol	ND	4300	µg/Kg 50 8/5/2011 12:55 PM
tert-Butylbenzene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Tetrachloroethene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Toluene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
trans-1,2-Dichloroethene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Trichloroethene	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Trichlorofluoromethane	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Vinyl chloride	ND	210	µg/Kg 50 8/5/2011 12:55 PM
Surr: 1,2-Dichloroethane-d4	89.2	65-141	%REC 50 8/5/2011 12:55 PM
Surr: 4-Bromofluorobenzene	111	57-134	%REC 50 8/5/2011 12:55 PM
Surr: Dibromofluoromethane	98.9	70-128	%REC 50 8/5/2011 12:55 PM
Surr: Toluene-d8	93.5	72-123	%REC 50 8/5/2011 12:55 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: 11-Aug-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-113-85
<b>Lab Order:</b> 119269	<b>Collection Date:</b> 8/3/2011 12:52:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 119269-003D	

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

**EPA 8015B(M)**

RunID: GC2_110805A	QC Batch: E11VS289	PrepDate: 8/3/2011	Analyst: TP		
GRO	1.1	0.82	mg/Kg	1	8/5/2011 03:24 PM
Surr: Bromofluorobenzene (FID)	109	51-161	%REC	1	8/5/2011 03:24 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: 11-Aug-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-113-85
<b>Lab Order:</b>	119269	<b>Collection Date:</b>	8/3/2011 12:52:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	119269-003G		

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110808H	QC Batch: 74761			PrepDate: 8/8/2011	Analyst: IL
Antimony	ND	2.0		mg/Kg	1 8/8/2011 08:25 PM
Arsenic	ND	1.0		mg/Kg	1 8/8/2011 08:25 PM
Barium	190	1.0		mg/Kg	1 8/8/2011 08:25 PM
Beryllium	ND	1.0		mg/Kg	1 8/8/2011 08:25 PM
Cadmium	1.2	1.0		mg/Kg	1 8/8/2011 08:25 PM
Chromium	20	1.0		mg/Kg	1 8/8/2011 08:25 PM
Cobalt	8.2	1.0		mg/Kg	1 8/8/2011 08:25 PM
Copper	25	2.0		mg/Kg	1 8/8/2011 08:25 PM
Lead	3.2	1.0		mg/Kg	1 8/8/2011 08:25 PM
Molybdenum	2.1	1.0		mg/Kg	1 8/8/2011 08:25 PM
Nickel	37	1.0		mg/Kg	1 8/8/2011 08:25 PM
Selenium	ND	1.0		mg/Kg	1 8/8/2011 08:25 PM
Silver	ND	1.0		mg/Kg	1 8/8/2011 08:25 PM
Thallium	ND	1.0		mg/Kg	1 8/8/2011 08:25 PM
Vanadium	41	1.0		mg/Kg	1 8/8/2011 08:25 PM
Zinc	56	1.0		mg/Kg	1 8/8/2011 08:25 PM

**DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID**

**LUFT**

**EPA 8015B(M)**

RunID: GC16_110808A	QC Batch: 74778			PrepDate: 8/5/2011	Analyst: CBR
DRO	15000	100		mg/Kg	10 8/8/2011 12:29 PM
ORO	23000	100		mg/Kg	10 8/8/2011 12:29 PM
Surr: p-Terphenyl	0	63-152	SDO	%REC	10 8/8/2011 12:29 PM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110810B	QC Batch: 74815			PrepDate: 8/9/2011	Analyst: VV
Mercury	ND	0.10		mg/Kg	1 8/10/2011 12:05 PM

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID: MS 13_110805A	QC Batch: 74772			PrepDate: 8/5/2011	Analyst: JSD
1,2,4-Trichlorobenzene	ND	160000		µg/Kg	100 8/5/2011 07:40 PM
1,2-Dichlorobenzene	ND	160000		µg/Kg	100 8/5/2011 07:40 PM
1,3-Dichlorobenzene	ND	160000		µg/Kg	100 8/5/2011 07:40 PM
1,4-Dichlorobenzene	ND	160000		µg/Kg	100 8/5/2011 07:40 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: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-85  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 12:52:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-003G

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

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID: MS 13_110805A	QC Batch: 74772	PrepDate: 8/5/2011	Analyst: JSD		
2,4,5-Trichlorophenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2,4,6-Trichlorophenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2,4-Dichlorophenol	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
2,4-Dimethylphenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2,4-Dinitrophenol	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
2,4-Dinitrotoluene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2,6-Dinitrotoluene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2-Chloronaphthalene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2-Chlorophenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2-Methylnaphthalene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2-Methylphenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
2-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
2-Nitrophenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
3,3'-Dichlorobenzidine	ND	330000	µg/Kg	100	8/5/2011 07:40 PM
3-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
4,6-Dinitro-2-methylphenol	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
4-Bromophenyl-phenylether	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
4-Chloro-3-methylphenol	ND	330000	µg/Kg	100	8/5/2011 07:40 PM
4-Chloroaniline	ND	330000	µg/Kg	100	8/5/2011 07:40 PM
4-Chlorophenyl-phenylether	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
4-Methylphenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
4-Nitroaniline	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
4-Nitrophenol	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
Acenaphthene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Acenaphthylene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Anthracene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzidine (M)	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
Benzo(a)anthracene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzo(a)pyrene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzo(b)fluoranthene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzo(g,h,i)perylene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzo(k)fluoranthene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM
Benzoic acid	ND	820000	µg/Kg	100	8/5/2011 07:40 PM
Benzyl alcohol	ND	330000	µg/Kg	100	8/5/2011 07:40 PM
Bis(2-chloroethoxy)methane	ND	160000	µg/Kg	100	8/5/2011 07:40 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: 11-Aug-11

**CLIENT:** Mactec **Client Sample ID:** E-113-85  
**Lab Order:** 119269 **Collection Date:** 8/3/2011 12:52:00 PM  
**Project:** METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL  
**Lab ID:** 119269-003G

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

**SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 3550B**

**EPA 8270C**

RunID:	MS 13_110805A	QC Batch:	74772	PrepDate:	8/5/2011	Analyst:	JSD
Bis(2-chloroethyl)ether	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Bis(2-chloroisopropyl)ether	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Bis(2-ethylhexyl)phthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Butylbenzylphthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Chrysene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Di-n-butylphthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Di-n-octylphthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Dibenz(a,h)anthracene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Dibenzofuran	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Diethylphthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Dimethylphthalate	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Fluoranthene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Fluorene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Hexachlorobenzene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Hexachlorobutadiene	ND	330000	µg/Kg	100	8/5/2011 07:40 PM		
Hexachlorocyclopentadiene	ND	330000	µg/Kg	100	8/5/2011 07:40 PM		
Hexachloroethane	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Indeno(1,2,3-cd)pyrene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Isophorone	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
N-Nitrosodi-n-propylamine	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
N-Nitrosodiphenylamine	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Naphthalene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Nitrobenzene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Pentachlorophenol	ND	820000	µg/Kg	100	8/5/2011 07:40 PM		
Phenanthrene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Phenol	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Pyrene	ND	160000	µg/Kg	100	8/5/2011 07:40 PM		
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO %REC	100	8/5/2011 07:40 PM		
Surr: 2,4,6-Tribromophenol	0	41-129	SDO %REC	100	8/5/2011 07:40 PM		
Surr: 2-Chlorophenol-d4	0	55-108	SDO %REC	100	8/5/2011 07:40 PM		
Surr: 2-Fluorobiphenyl	0	56-114	SDO %REC	100	8/5/2011 07:40 PM		
Surr: 2-Fluorophenol	0	50-108	SDO %REC	100	8/5/2011 07:40 PM		
Surr: 4-Terphenyl-d14	0	59-141	SDO %REC	100	8/5/2011 07:40 PM		
Surr: Nitrobenzene-d5	0	45-114	SDO %REC	100	8/5/2011 07:40 PM		
Surr: Phenol-d5	0	46-118	SDO %REC	100	8/5/2011 07:40 PM		

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



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**CLIENT:** Mactec  
**Work Order:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-74761</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/8/2011</b>	RunNo: <b>135679</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74761</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2222222</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

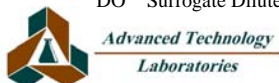
Antimony	0.320	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	0.217	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: <b>LCS-74761</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/8/2011</b>	RunNo: <b>135679</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74761</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2222223</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	46.141	2.0	50.00	0.3197	91.6	80	120				
Arsenic	44.373	1.0	50.00	0	88.7	80	120				
Barium	48.462	1.0	50.00	0	96.9	80	120				
Beryllium	47.308	1.0	50.00	0	94.6	80	120				
Cadmium	44.957	1.0	50.00	0	89.9	80	120				
Chromium	43.740	1.0	50.00	0	87.5	80	120				
Cobalt	46.973	1.0	50.00	0	93.9	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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

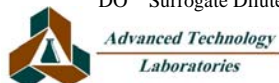
**TestCode: 6010\_S**

Sample ID: <b>LCS-74761</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/8/2011</b>		RunNo: <b>135679</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>74761</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/8/2011</b>		SeqNo: <b>2222223</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	48.629	2.0	50.00	0	97.3	80	120					
Lead	44.891	1.0	50.00	0	89.8	80	120					
Molybdenum	48.368	1.0	50.00	0	96.7	80	120					
Nickel	44.610	1.0	50.00	0	89.2	80	120					
Selenium	42.630	1.0	50.00	0	85.3	80	120					
Silver	47.780	1.0	50.00	0	95.6	80	120					
Thallium	44.935	1.0	50.00	0.2171	89.4	80	120					
Vanadium	46.035	1.0	50.00	0	92.1	80	120					
Zinc	45.491	1.0	50.00	0	91.0	80	120					

Sample ID: <b>119244-042A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>8/8/2011</b>		RunNo: <b>135679</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74761</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>8/8/2011</b>		SeqNo: <b>2222227</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	66.446	2.0	125.0	1.587	51.9	32	105					
Arsenic	98.650	1.0	125.0	2.261	77.1	49	106					
Barium	232.466	1.0	125.0	130.9	81.2	31	133					
Beryllium	102.215	1.0	125.0	0	81.8	56	106					
Cadmium	94.125	1.0	125.0	0.5518	74.9	51	103					
Chromium	155.510	1.0	125.0	55.72	79.8	45	114					
Cobalt	115.364	1.0	125.0	14.72	80.5	52	106					
Copper	131.772	2.0	125.0	19.00	90.2	54	125					
Lead	102.073	1.0	125.0	7.699	75.5	34	126					
Molybdenum	100.012	1.0	125.0	0	80.0	54	106					
Nickel	181.519	1.0	125.0	84.00	78.0	45	111					
Selenium	92.806	1.0	125.0	0	74.2	47	104					
Silver	107.145	1.0	125.0	0	85.7	56	112					
Thallium	92.301	1.0	125.0	0	73.8	46	101					
Vanadium	135.028	1.0	125.0	32.76	81.8	54	114					
Zinc	135.519	1.0	125.0	37.57	78.4	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: 119269

Project: METRO WESTSIDE EXTENSION, 4953-10-1

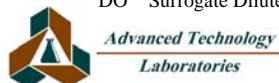
# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID: 119244-042A-MSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2011	RunNo: 135679						
Client ID: ZZZZZZ	Batch ID: 74761	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 8/8/2011	SeqNo: 2222228						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	63.848	2.0	125.0	1.587	49.8	32	105	66.45	3.99	20	
Arsenic	94.184	1.0	125.0	2.261	73.5	49	106	98.65	4.63	20	
Barium	222.580	1.0	125.0	130.9	73.3	31	133	232.5	4.35	20	
Beryllium	98.975	1.0	125.0	0	79.2	56	106	102.2	3.22	20	
Cadmium	91.653	1.0	125.0	0.5518	72.9	51	103	94.13	2.66	20	
Chromium	150.863	1.0	125.0	55.72	76.1	45	114	155.5	3.03	20	
Cobalt	112.232	1.0	125.0	14.72	78.0	52	106	115.4	2.75	20	
Copper	128.614	2.0	125.0	19.00	87.7	54	125	131.8	2.43	20	
Lead	97.753	1.0	125.0	7.699	72.0	34	126	102.1	4.32	20	
Molybdenum	96.527	1.0	125.0	0	77.2	54	106	100.0	3.55	20	
Nickel	173.727	1.0	125.0	84.00	71.8	45	111	181.5	4.39	20	
Selenium	89.038	1.0	125.0	0	71.2	47	104	92.81	4.14	20	
Silver	104.936	1.0	125.0	0	83.9	56	112	107.1	2.08	20	
Thallium	90.062	1.0	125.0	0	72.0	46	101	92.30	2.46	20	
Vanadium	130.486	1.0	125.0	32.76	78.2	54	114	135.0	3.42	20	
Zinc	130.188	1.0	125.0	37.57	74.1	28	125	135.5	4.01	20	

**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



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

**CLIENT:** Mactec  
**Work Order:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-74815</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/9/2011</b>	RunNo: <b>135720</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74815</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/10/2011</b>	SeqNo: <b>2222732</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-74815</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/9/2011</b>	RunNo: <b>135720</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74815</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/10/2011</b>	SeqNo: <b>2222733</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.776	0.10	0.8300	0	93.4	80	120				
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Sample ID: <b>119278-028A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/9/2011</b>	RunNo: <b>135720</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74815</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/10/2011</b>	SeqNo: <b>2222734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

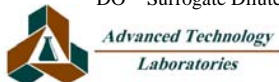
Mercury	0.697	0.10	0.8300	0.03205	80.1	70	130				
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Sample ID: <b>119278-028A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/9/2011</b>	RunNo: <b>135720</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74815</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>8/10/2011</b>	SeqNo: <b>2222735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.681	0.10	0.8300	0.03205	78.2	70	130	0.6966	2.22	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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>MB-74778</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135660</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74778</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2221790</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	69.660		80.00		87.1	63	152				

Sample ID: <b>LCS-74778</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135660</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74778</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2221791</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	852.560	10	1000	0	85.3	76	139				
Surr: p-Terphenyl	69.590		80.00		87.0	63	152				

Sample ID: <b>119281-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135660</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74778</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2221792</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

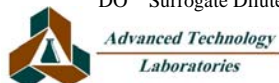
DRO	768.060	10	1000	0	76.8	60	158				
Surr: p-Terphenyl	60.380		80.00		75.5	63	152				

Sample ID: <b>119281-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135660</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74778</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>8/8/2011</b>	SeqNo: <b>2221793</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	776.800	10	1000	0	77.7	60	158	768.1	1.13	20	
Surr: p-Terphenyl	58.660		80.00		73.3	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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>E110805LC1</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222722</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.210	1.0	5.000	0	104	70	130				
Surr: Bromofluorobenzene (FID)	111.924		100.0		112	51	161				

Sample ID: <b>E110805MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222723</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.853	1.0	5.000	0	97.1	41	146				
Surr: Bromofluorobenzene (FID)	128.510		100.0		129	51	161				

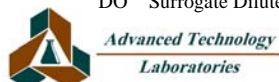
Sample ID: <b>E110805MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222724</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.913	1.0	5.000	0	98.3	41	146	4.853	1.23	20	
Surr: Bromofluorobenzene (FID)	129.844		100.0		130	51	161		0	0	

Sample ID: <b>E110805MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222725</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)	95.850		100.0		95.8	51	161				

Sample ID: <b>119244-022AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222727</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.198	1.0	5.000	0	104	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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>119244-022AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222727</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	123.794		100.0		124	51	161				

Sample ID: <b>119244-022AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>135648</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS289</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222728</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.036	1.0	5.000	0	101	41	146	5.198	3.17	20	
Surr: Bromofluorobenzene (FID)	124.622		100.0		125	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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Laboratories

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**CLIENT:** Mactec  
**Work Order:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

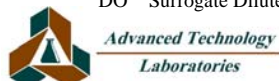
Sample ID: <b>T110805LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135634</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>T11VS139</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/5/2011</b>		SeqNo: <b>2222293</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	50.870	5.0	50.00	0	102	70	130					
Benzene	95.660	5.0	100.0	0	95.7	70	130					
Chlorobenzene	51.380	5.0	50.00	0	103	70	130					
MTBE	54.970	5.0	50.00	0	110	70	130					
Toluene	98.640	5.0	100.0	0	98.6	70	130					
Trichloroethene	47.590	5.0	50.00	0	95.2	70	130					
Surr: 1,2-Dichloroethane-d4	49.540		50.00		99.1	65	141					
Surr: 4-Bromofluorobenzene	43.010		50.00		86.0	57	134					
Surr: Dibromofluoromethane	51.600		50.00		103	70	128					
Surr: Toluene-d8	45.260		50.00		90.5	72	123					

Sample ID: <b>T110805MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135634</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>T11VS139</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/5/2011</b>		SeqNo: <b>2222294</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	49.120	5.0	50.00	0	98.2	70	130					
Benzene	96.360	5.0	100.0	0	96.4	70	130					
Chlorobenzene	53.210	5.0	50.00	0	106	70	130					
MTBE	55.200	5.0	50.00	0	110	70	130					
Toluene	101.170	5.0	100.0	0	101	70	130					
Trichloroethene	48.640	5.0	50.00	0	97.3	70	130					
Surr: 1,2-Dichloroethane-d4	50.870		50.00		102	65	141					
Surr: 4-Bromofluorobenzene	43.460		50.00		86.9	57	134					
Surr: Dibromofluoromethane	54.310		50.00		109	70	128					
Surr: Toluene-d8	46.830		50.00		93.7	72	123					

Sample ID: <b>T110805MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>135634</b>		
Client ID: <b>ZZZZZ</b>		Batch ID: <b>T11VS139</b>		TestNo: <b>EPA 8260B</b>				Analysis Date: <b>8/5/2011</b>		SeqNo: <b>2222295</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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

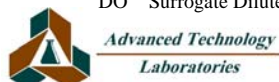
**TestCode: 8260\_S\_5035**

Sample ID: <b>T110805MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135634</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>T11VS139</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222295</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	46.540	5.0	50.00	0	93.1	70	130	49.12	5.39	20	
Benzene	96.900	5.0	100.0	0	96.9	70	130	96.36	0.559	20	
Chlorobenzene	51.330	5.0	50.00	0	103	70	130	53.21	3.60	20	
MTBE	54.600	5.0	50.00	0	109	70	130	55.20	1.09	20	
Toluene	100.820	5.0	100.0	0	101	70	130	101.2	0.347	20	
Trichloroethene	49.710	5.0	50.00	0	99.4	70	130	48.64	2.18	20	
Surr: 1,2-Dichloroethane-d4	49.630		50.00		99.3	65	141		0	0	
Surr: 4-Bromofluorobenzene	45.290		50.00		90.6	57	134		0	0	
Surr: Dibromofluoromethane	51.250		50.00		103	70	128		0	0	
Surr: Toluene-d8	47.440		50.00		94.9	72	123		0	0	

Sample ID: <b>T110805MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135634</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS139</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222296</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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>T110805MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135634</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS139</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222296</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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

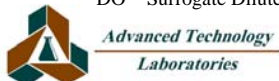
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>T110805MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>135634</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS139</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2222296</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	51.990		50.00		104	65	141				
Surr: 4-Bromofluorobenzene	39.910		50.00		79.8	57	134				
Surr: Dibromofluoromethane	51.890		50.00		104	70	128				
Surr: Toluene-d8	46.510		50.00		93.0	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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**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

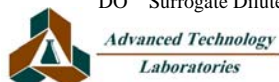
**TestCode: 8270\_S\_FULL**

Sample ID: <b>MB-74772</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>
Client ID: <b>PBS</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221553</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330									
1,2-Dichlorobenzene	ND	330									
1,3-Dichlorobenzene	ND	330									
1,4-Dichlorobenzene	ND	330									
2,4,5-Trichlorophenol	ND	330									
2,4,6-Trichlorophenol	ND	330									
2,4-Dichlorophenol	ND	1600									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3'-Dichlorobenzidine	ND	660									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	660									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									
Acenaphthylene	ND	330									
Anthracene	ND	330									

**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: 119269

Project: METRO WESTSIDE EXTENSION, 4953-10-1

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_S\_FULL

Sample ID: <b>MB-74772</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221553</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzidine (M)	ND	1600									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	330									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	330									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	660									
Hexachlorocyclopentadiene	ND	660									
Hexachloroethane	ND	330									
Indeno(1,2,3-cd)pyrene	ND	330									
Isophorone	ND	330									
N-Nitrosodi-n-propylamine	ND	330									
N-Nitrosodiphenylamine	ND	330									

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- DO Surrogate Diluted Out
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## ANALYTICAL QC SUMMARY REPORT

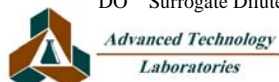
**TestCode: 8270\_S\_FULL**

Sample ID: <b>MB-74772</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221553</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	330									
Nitrobenzene	ND	330									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2847.000		3330		85.5	45	105				
Surr: 2,4,6-Tribromophenol	2939.667		3330		88.3	41	129				
Surr: 2-Chlorophenol-d4	3011.333		3330		90.4	55	108				
Surr: 2-Fluorobiphenyl	2954.000		3330		88.7	56	114				
Surr: 2-Fluorophenol	3043.000		3330		91.4	50	108				
Surr: 4-Terphenyl-d14	3031.667		3330		91.0	59	141				
Surr: Nitrobenzene-d5	3036.667		3330		91.2	45	114				
Surr: Phenol-d5	3183.333		3330		95.6	46	118				

Sample ID: <b>LCS-74772</b>	SampType: <b>LCS</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221554</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2558.667	330	3330	0	76.8	67	107				
1,4-Dichlorobenzene	2418.667	330	3330	0	72.6	64	99				
2,4-Dinitrotoluene	3192.333	330	3330	0	95.9	81	122				
2-Chlorophenol	2436.000	330	3330	0	73.2	62	112				
4-Chloro-3-methylphenol	2859.667	660	3330	0	85.9	64	138				
4-Nitrophenol	3395.000	1600	3330	0	102	60	142				
Acenaphthene	2923.667	330	3330	0	87.8	70	116				
N-Nitrosodi-n-propylamine	2773.667	330	3330	0	83.3	73	115				
Pentachlorophenol	2311.000	1600	3330	0	69.4	59	135				
Phenol	2592.667	330	3330	0	77.9	61	120				
Pyrene	2964.333	330	3330	0	89.0	75	117				

**Qualifiers:**

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



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**CLIENT:** Mactec  
**Work Order:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

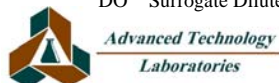
**TestCode: 8270\_S\_FULL**

Sample ID: <b>LCS-74772</b>		SampType: <b>LCS</b>		TestCode: <b>8270_S_FULL</b> Units: <b>µg/Kg</b>		Prep Date: <b>8/5/2011</b>		RunNo: <b>135645</b>			
Client ID: <b>LCSS</b>		Batch ID: <b>74772</b>		TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>		SeqNo: <b>2221554</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1,2-Dichlorobenzene-d4	2504.000		3330		75.2	45	105				
Surr: 2,4,6-Tribromophenol	3290.333		3330		98.8	41	129				
Surr: 2-Chlorophenol-d4	2687.667		3330		80.7	55	108				
Surr: 2-Fluorobiphenyl	2758.333		3330		82.8	56	114				
Surr: 2-Fluorophenol	2671.000		3330		80.2	50	108				
Surr: 4-Terphenyl-d14	3017.000		3330		90.6	59	141				
Surr: Nitrobenzene-d5	2844.333		3330		85.4	45	114				
Surr: Phenol-d5	2838.000		3330		85.2	46	118				

Sample ID: <b>119255-004AMS</b>		SampType: <b>MS</b>		TestCode: <b>8270_S_FULL</b> Units: <b>µg/Kg</b>		Prep Date: <b>8/5/2011</b>		RunNo: <b>135645</b>			
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74772</b>		TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>		SeqNo: <b>2221555</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2479.333	330	3330	0	74.5	62	109				
1,4-Dichlorobenzene	2382.333	330	3330	0	71.5	57	99				
2,4-Dinitrotoluene	3270.667	330	3330	0	98.2	76	126				
2-Chlorophenol	2390.333	330	3330	0	71.8	52	120				
4-Chloro-3-methylphenol	2916.333	660	3330	0	87.6	63	137				
4-Nitrophenol	3435.000	1600	3330	0	103	52	144				
Acenaphthene	2921.000	330	3330	0	87.7	61	121				
N-Nitrosodi-n-propylamine	2656.667	330	3330	0	79.8	67	116				
Pentachlorophenol	2189.333	1600	3330	0	65.7	47	143				
Phenol	2519.000	330	3330	0	75.6	54	126				
Pyrene	3014.000	330	3330	0	90.5	68	121				
Surr: 1,2-Dichlorobenzene-d4	2482.667		3330		74.6	45	105				
Surr: 2,4,6-Tribromophenol	3457.333		3330		104	41	129				
Surr: 2-Chlorophenol-d4	2603.667		3330		78.2	55	108				
Surr: 2-Fluorobiphenyl	2684.667		3330		80.6	56	114				
Surr: 2-Fluorophenol	2584.333		3330		77.6	50	108				
Surr: 4-Terphenyl-d14	3248.333		3330		97.5	59	141				

**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:** 119269  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

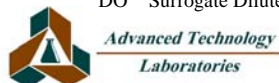
**TestCode: 8270\_S\_FULL**

Sample ID: <b>119255-004AMS</b>	SampType: <b>MS</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221555</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	2740.333		3330		82.3	45	114				
Surr: Phenol-d5	2753.000		3330		82.7	46	118				

Sample ID: <b>119255-004AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8270_S_FULL</b>	Units: <b>µg/Kg</b>	Prep Date: <b>8/5/2011</b>	RunNo: <b>135645</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>74772</b>	TestNo: <b>EPA 8270C EPA 3550B</b>		Analysis Date: <b>8/5/2011</b>	SeqNo: <b>2221556</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2250.333	330	3330	0	67.6	62	109	2479	9.68	20	
1,4-Dichlorobenzene	2052.000	330	3330	0	61.6	57	99	2382	14.9	20	
2,4-Dinitrotoluene	2997.000	330	3330	0	90.0	76	126	3271	8.73	20	
2-Chlorophenol	2114.333	330	3330	0	63.5	52	120	2390	12.3	20	
4-Chloro-3-methylphenol	2646.000	660	3330	0	79.5	63	137	2916	9.72	20	
4-Nitrophenol	2994.000	1600	3330	0	89.9	52	144	3435	13.7	20	
Acenaphthene	2701.333	330	3330	0	81.1	61	121	2921	7.81	20	
N-Nitrosodi-n-propylamine	2424.333	330	3330	0	72.8	67	116	2657	9.15	20	
Pentachlorophenol	2026.333	1600	3330	0	60.9	47	143	2189	7.73	20	
Phenol	2267.667	330	3330	0	68.1	54	126	2519	10.5	20	
Pyrene	2786.000	330	3330	0	83.7	68	121	3014	7.86	20	
Surr: 1,2-Dichlorobenzene-d4	2117.000		3330		63.6	45	105		0	0	
Surr: 2,4,6-Tribromophenol	3229.000		3330		97.0	41	129		0	0	
Surr: 2-Chlorophenol-d4	2320.000		3330		69.7	55	108		0	0	
Surr: 2-Fluorobiphenyl	2457.000		3330		73.8	56	114		0	0	
Surr: 2-Fluorophenol	2272.333		3330		68.2	50	108		0	0	
Surr: 4-Terphenyl-d14	2907.000		3330		87.3	59	141		0	0	
Surr: Nitrobenzene-d5	2420.333		3330		72.7	45	114		0	0	
Surr: Phenol-d5	2448.333		3330		73.5	46	118		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   |  |



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

P.O.#: 20106374 Quote #: \_\_\_\_\_ Date: 8/4/11

Logged By: [Signature]

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

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

Client: MACTEC Address: 5628 E. SLAUSON AVE State: CA Zip Code: 90040

Attn: MATT FRAYCHINEALD City: COS ANGELES

Project Name: Metro Westside Extension Project #: 4953-10-1561 Sampler: DUAN D. SUYER (Printed Name)

Relinquished by: (Signature and Printed Name) [Signature] DUAN D. SUYER Date: 08/04/11 Time: 7:00 Received by: (Signature and Printed Name) [Signature] Matt Fraychineald Date: 8/4/11 Time: 11:11

Relinquished by: (Signature and Printed Name) [Signature] Matt Fraychineald Date: 8/4/11 Time: 11:11

Relinquished by: (Signature and Printed Name) [Signature] Matt Fraychineald Date: 8/4/11 Time: 11:11

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: [Signature] Matt Fraychineald Date: 8/4/11

Special Instructions/Comments: \_\_\_\_\_

Bill To: \_\_\_\_\_ Attn: \_\_\_\_\_ Co: \_\_\_\_\_ Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Add Analysis(es) Requested:  
 8081A (Pesticides)  8260B (PCB)  8270C (Nitrates)  6010B (Total Metal)  8015B (GRO) /  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)

ITEM	LAB USE ONLY:		Sample Description		Date	Time
	Batch #:	Lab No.	Sample I.D. / Location			
	119269-007		E-113-75		8/03	11:56
		2	E-113-80		8/03	12:25
		3	E-113-85		8/03	12:52
		4	E-113-40		8/03	10:20
		5	E-113-50		8/03	10:40
		6	E-113-60		8/03	11:03
		7	E-113-70		8/03	11:30

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

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>

REMARKS: \_\_\_\_\_

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

Container(s): \_\_\_\_\_ TAT # \_\_\_\_\_ Type \_\_\_\_\_

SPERMATION: \_\_\_\_\_

Specify Appropriate Matrix: \_\_\_\_\_

SOIL \_\_\_\_\_ SOLID \_\_\_\_\_ SEDIMENT \_\_\_\_\_ GROUND WATER \_\_\_\_\_ DRINKING WATER \_\_\_\_\_ WASTEWATER \_\_\_\_\_ STORMWATER \_\_\_\_\_ AQUEOUS \_\_\_\_\_

REMARKS: Hold Hold Hold Hold

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

Rev. 2010-0325

July 18, 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.: 118856

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 11, 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:** 118856

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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)/8021B

Samples 118856-002D and 118856-003D, surrogate recovery biased high possibly due to matrix interferences.

Samples 118728-002AMS and 118728-002AMSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8015B(M) (DRO/ORO)

Samples 118856-002G and 118856-003G, surrogate diluted out.

Analytical Comments for EPA 8260B

Samples 118856-002A and 118856-003A, surrogate recovery biased high possibly due to matrix interferences.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-20
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 11:05:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-001A	

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

**EPA 8260B**

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1,1-Trichloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1,2,2-Tetrachloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1,2-Trichloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1-Dichloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1-Dichloroethene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,1-Dichloropropene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2,3-Trichlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2,3-Trichloropropane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2,4-Trichlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2,4-Trimethylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2-Dibromo-3-chloropropane	ND	8.1		µg/Kg	1	7/12/2011 04:28 PM
1,2-Dibromoethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2-Dichlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2-Dichloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,2-Dichloropropane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,3,5-Trimethylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,3-Dichlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,3-Dichloropropane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
1,4-Dichlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
2,2-Dichloropropane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
2-Chlorotoluene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
4-Chlorotoluene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
4-Isopropyltoluene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Benzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Bromobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Bromodichloromethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Bromoform	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Bromomethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Carbon tetrachloride	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Chlorobenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Chloroethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Chloroform	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Chloromethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
cis-1,2-Dichloroethene	ND	4.1		µg/Kg	1	7/12/2011 04:28 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: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-20
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 11:05:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-001A	

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

**EPA 8260B**

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Di-isopropyl ether	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Dibromochloromethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Dibromomethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Dichlorodifluoromethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Ethyl Tert-butyl ether	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Ethylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Hexachlorobutadiene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Isopropylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
m,p-Xylene	ND	8.1		µg/Kg	1	7/12/2011 04:28 PM
Methylene chloride	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
MTBE	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
n-Butylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
n-Propylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Naphthalene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
o-Xylene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
sec-Butylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Styrene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Tert-amyl methyl ether	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Tert-Butanol	ND	81		µg/Kg	1	7/12/2011 04:28 PM
tert-Butylbenzene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Tetrachloroethene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Toluene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
trans-1,2-Dichloroethene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Trichloroethene	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Trichlorofluoromethane	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Vinyl chloride	ND	4.1		µg/Kg	1	7/12/2011 04:28 PM
Surr: 1,2-Dichloroethane-d4	104	65-141		%REC	1	7/12/2011 04:28 PM
Surr: 4-Bromofluorobenzene	86.2	57-134		%REC	1	7/12/2011 04:28 PM
Surr: Dibromofluoromethane	101	70-128		%REC	1	7/12/2011 04:28 PM
Surr: Toluene-d8	89.2	72-123		%REC	1	7/12/2011 04:28 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: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-20
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 11:05:00 AM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-001D	

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

**EPA 8015B(M)**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
GRO	ND	0.78	mg/Kg	1	7/12/2011 06:54 PM
Surr: Bromofluorobenzene (FID)	135	51-161	%REC	1	7/12/2011 06:54 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
Benzene	ND	3.9	µg/Kg	1	7/12/2011 06:54 PM
Ethylbenzene	ND	3.9	µg/Kg	1	7/12/2011 06:54 PM
m,p-Xylene	ND	7.8	µg/Kg	1	7/12/2011 06:54 PM
o-Xylene	ND	3.9	µg/Kg	1	7/12/2011 06:54 PM
Toluene	ND	3.9	µg/Kg	1	7/12/2011 06:54 PM
Surr: Bromofluorobenzene (PID)	106	33-163	%REC	1	7/12/2011 06:54 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: 18-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-115-20
<b>Lab Order:</b>	118856	<b>Collection Date:</b>	7/8/2011 11:05:00 AM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118856-001G		

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_110713A	QC Batch: 74194				PrepDate: 7/12/2011	Analyst: <b>CBR</b>
DRO	660	10		mg/Kg	1	7/13/2011 12:21 PM
ORO	1900	10		mg/Kg	1	7/13/2011 12:21 PM
Surr: p-Terphenyl	120	63-152		%REC	1	7/13/2011 12:21 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: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-40
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 1:10:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-002A	

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

**EPA 8260B**

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>
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1,1,1,2-Tetrachloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1,1-Trichloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1,2,2-Tetrachloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1,2-Trichloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1-Dichloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1-Dichloroethene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,1-Dichloropropene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2,3-Trichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2,3-Trichloropropane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2,4-Trichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2,4-Trimethylbenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2-Dibromo-3-chloropropane	ND	7.6		µg/Kg	1	7/12/2011 04:46 PM
1,2-Dibromoethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2-Dichloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,2-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,3,5-Trimethylbenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,3-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,3-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
1,4-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
2,2-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
2-Chlorotoluene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
4-Chlorotoluene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
4-Isopropyltoluene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Benzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Bromobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Bromodichloromethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Bromoform	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Bromomethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Carbon tetrachloride	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Chlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Chloroethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Chloroform	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
Chloromethane	ND	3.8		µg/Kg	1	7/12/2011 04:46 PM
cis-1,2-Dichloroethene	ND	3.8		µg/Kg	1	7/12/2011 04:46 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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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 18-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-115-40
<b>Lab Order:</b>	118856	<b>Collection Date:</b>	7/8/2011 1:10:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118856-002A		

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

**EPA 8260B**

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Di-isopropyl ether	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Dibromochloromethane	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Dibromomethane	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Dichlorodifluoromethane	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Ethyl Tert-butyl ether	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Ethylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Hexachlorobutadiene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Isopropylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
m,p-Xylene	ND	7.6	µg/Kg	1	7/12/2011 04:46 PM
Methylene chloride	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
MTBE	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
n-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
n-Propylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Naphthalene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
o-Xylene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
sec-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Styrene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Tert-amyl methyl ether	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Tert-Butanol	ND	76	µg/Kg	1	7/12/2011 04:46 PM
tert-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Tetrachloroethene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Toluene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
trans-1,2-Dichloroethene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Trichloroethene	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Trichlorofluoromethane	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Vinyl chloride	ND	3.8	µg/Kg	1	7/12/2011 04:46 PM
Surr: 1,2-Dichloroethane-d4	104	65-141	%REC	1	7/12/2011 04:46 PM
Surr: 4-Bromofluorobenzene	192	57-134	%REC	1	7/12/2011 04:46 PM
Surr: Dibromofluoromethane	103	70-128	%REC	1	7/12/2011 04:46 PM
Surr: Toluene-d8	92.3	72-123	%REC	1	7/12/2011 04:46 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: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-40
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 1:10:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-002D	

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

**EPA 8015B(M)**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
GRO	16	0.78	mg/Kg	1	7/12/2011 07:10 PM
Surr: Bromofluorobenzene (FID)	554	51-161	S %REC	1	7/12/2011 07:10 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
Benzene	ND	3.9	µg/Kg	1	7/12/2011 07:10 PM
Ethylbenzene	ND	3.9	µg/Kg	1	7/12/2011 07:10 PM
m,p-Xylene	ND	7.8	µg/Kg	1	7/12/2011 07:10 PM
o-Xylene	ND	3.9	µg/Kg	1	7/12/2011 07:10 PM
Toluene	ND	3.9	µg/Kg	1	7/12/2011 07:10 PM
Surr: Bromofluorobenzene (PID)	141	33-163	%REC	1	7/12/2011 07:10 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	



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**ANALYTICAL RESULTS**  
 Print Date: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-40
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 1:10:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-002G	

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_110713A	QC Batch: 74194			PrepDate: 7/12/2011		Analyst: CBR
DRO	17000	250		mg/Kg	25	7/13/2011 01:41 PM
ORO	20000	250		mg/Kg	25	7/13/2011 01:41 PM
Surr: p-Terphenyl	0	63-152	SDO	%REC	25	7/13/2011 01:41 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: 18-Jul-11

<b>CLIENT:</b> Mactec	<b>Client Sample ID:</b> E-115-60
<b>Lab Order:</b> 118856	<b>Collection Date:</b> 7/8/2011 2:50:00 PM
<b>Project:</b> METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 118856-003A	

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

**EPA 8260B**

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>
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Compound	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1,1-Trichloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1,2,2-Tetrachloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1,2-Trichloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1-Dichloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1-Dichloroethene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,1-Dichloropropene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2,3-Trichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2,3-Trichloropropane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2,4-Trichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2,4-Trimethylbenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2-Dibromo-3-chloropropane	ND	7.7		µg/Kg	1	7/12/2011 05:05 PM
1,2-Dibromoethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2-Dichloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,2-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,3,5-Trimethylbenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,3-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,3-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
1,4-Dichlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
2,2-Dichloropropane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
2-Chlorotoluene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
4-Chlorotoluene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
4-Isopropyltoluene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Benzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Bromobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Bromodichloromethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Bromoform	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Bromomethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Carbon tetrachloride	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Chlorobenzene	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Chloroethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Chloroform	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
Chloromethane	ND	3.8		µg/Kg	1	7/12/2011 05:05 PM
cis-1,2-Dichloroethene	ND	3.8		µg/Kg	1	7/12/2011 05:05 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: 18-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-115-60
<b>Lab Order:</b>	118856	<b>Collection Date:</b>	7/8/2011 2:50:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118856-003A		

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

### EPA 8260B

RunID: MS5_110712A	QC Batch: T11VS126	PrepDate: 7/11/2011	Analyst: <b>BD</b>		
cis-1,3-Dichloropropene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Di-isopropyl ether	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Dibromochloromethane	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Dibromomethane	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Dichlorodifluoromethane	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Ethyl Tert-butyl ether	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Ethylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Hexachlorobutadiene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Isopropylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
m,p-Xylene	ND	7.7	µg/Kg	1	7/12/2011 05:05 PM
Methylene chloride	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
MTBE	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
n-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
n-Propylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Naphthalene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
o-Xylene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
sec-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Styrene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Tert-amyl methyl ether	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Tert-Butanol	ND	77	µg/Kg	1	7/12/2011 05:05 PM
tert-Butylbenzene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Tetrachloroethene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Toluene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
trans-1,2-Dichloroethene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Trichloroethene	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Trichlorofluoromethane	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Vinyl chloride	ND	3.8	µg/Kg	1	7/12/2011 05:05 PM
Surr: 1,2-Dichloroethane-d4	101	65-141	%REC	1	7/12/2011 05:05 PM
Surr: 4-Bromofluorobenzene	138	57-134	%REC	1	7/12/2011 05:05 PM
Surr: Dibromofluoromethane	97.7	70-128	%REC	1	7/12/2011 05:05 PM
Surr: Toluene-d8	93.4	72-123	%REC	1	7/12/2011 05:05 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: 18-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-115-60
<b>Lab Order:</b>	118856	<b>Collection Date:</b>	7/8/2011 2:50:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118856-003D		

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

**EPA 8015B(M)**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
GRO	7.3	0.78	mg/Kg	1	7/12/2011 07:25 PM
Surr: Bromofluorobenzene (FID)	309	51-161	S %REC	1	7/12/2011 07:25 PM

**VOLATILE ORGANIC COMPOUNDS BY GC/PID**

**EPA 8021B**

RunID: GC2_110712A	QC Batch: E11VS257	PrepDate: 7/8/2011	Analyst: TP		
Benzene	ND	3.9	µg/Kg	1	7/12/2011 07:25 PM
Ethylbenzene	ND	3.9	µg/Kg	1	7/12/2011 07:25 PM
m,p-Xylene	ND	7.8	µg/Kg	1	7/12/2011 07:25 PM
o-Xylene	ND	3.9	µg/Kg	1	7/12/2011 07:25 PM
Toluene	ND	3.9	µg/Kg	1	7/12/2011 07:25 PM
Surr: Bromofluorobenzene (PID)	111	33-163	%REC	1	7/12/2011 07:25 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: 18-Jul-11

<b>CLIENT:</b>	Mactec	<b>Client Sample ID:</b>	E-115-60
<b>Lab Order:</b>	118856	<b>Collection Date:</b>	7/8/2011 2:50:00 PM
<b>Project:</b>	METRO WESTSIDE EXTENSION, 4953-10	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	118856-003G		

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_110714C	QC Batch: 74243			PrepDate: 7/14/2011	Analyst: IL
Antimony	ND	2.0		mg/Kg	1 7/14/2011 12:38 PM
Arsenic	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Barium	16	1.0		mg/Kg	1 7/14/2011 12:38 PM
Beryllium	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Cadmium	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Chromium	6.7	1.0		mg/Kg	1 7/14/2011 12:38 PM
Cobalt	2.0	1.0		mg/Kg	1 7/14/2011 12:38 PM
Copper	2.4	2.0		mg/Kg	1 7/14/2011 12:38 PM
Lead	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Molybdenum	1.7	1.0		mg/Kg	1 7/14/2011 12:38 PM
Nickel	22	1.0		mg/Kg	1 7/14/2011 12:38 PM
Selenium	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Silver	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Thallium	ND	1.0		mg/Kg	1 7/14/2011 12:38 PM
Vanadium	24	1.0		mg/Kg	1 7/14/2011 12:38 PM
Zinc	8.7	1.0		mg/Kg	1 7/14/2011 12:38 PM

**DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID**

**LUFT**

**EPA 8015B(M)**

RunID: GC16_110713A	QC Batch: 74194			PrepDate: 7/12/2011	Analyst: CBR
DRO	39000	200		mg/Kg	20 7/13/2011 04:55 PM
ORO	56000	200		mg/Kg	20 7/13/2011 04:55 PM
Surr: p-Terphenyl	0	63-152	SDO	%REC	20 7/13/2011 04:55 PM

**MERCURY BY COLD VAPOR TECHNIQUE**

**EPA 7471A**

RunID: AA1_110714A	QC Batch: 74242			PrepDate: 7/14/2011	Analyst: VV
Mercury	ND	0.10		mg/Kg	1 7/14/2011 12:11 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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

**ANALYTICAL QC SUMMARY REPORT**

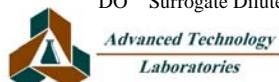
**TestCode: 6010\_S**

Sample ID: <b>MB-74243</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134951</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74243</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208456</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	0.389	1.0									

Sample ID: <b>LCS-74243</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134951</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74243</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208457</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	50.112	2.0	50.00	0	100	80	120				
Arsenic	49.914	1.0	50.00	0	99.8	80	120				
Barium	52.654	1.0	50.00	0	105	80	120				
Beryllium	51.109	1.0	50.00	0	102	80	120				
Cadmium	50.345	1.0	50.00	0	101	80	120				
Chromium	47.874	1.0	50.00	0	95.7	80	120				
Cobalt	52.226	1.0	50.00	0	104	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

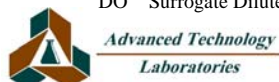
**TestCode: 6010\_S**

Sample ID: <b>LCS-74243</b>		SampType: <b>LCS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/14/2011</b>		RunNo: <b>134951</b>		
Client ID: <b>LCSS</b>		Batch ID: <b>74243</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/14/2011</b>		SeqNo: <b>2208457</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	51.684	2.0	50.00	0	103	80	120					
Lead	51.653	1.0	50.00	0	103	80	120					
Molybdenum	53.379	1.0	50.00	0	107	80	120					
Nickel	49.756	1.0	50.00	0	99.5	80	120					
Selenium	47.751	1.0	50.00	0	95.5	80	120					
Silver	50.246	1.0	50.00	0	100	80	120					
Thallium	49.834	1.0	50.00	0	99.7	80	120					
Vanadium	52.357	1.0	50.00	0	105	80	120					
Zinc	51.280	1.0	50.00	0.3892	102	80	120					

Sample ID: <b>118913-005A-MS</b>		SampType: <b>MS</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/14/2011</b>		RunNo: <b>134951</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74243</b>		TestNo: <b>EPA 6010B EPA 3050B</b>				Analysis Date: <b>7/14/2011</b>		SeqNo: <b>2208464</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	87.197	2.0	125.0	0.2119	69.6	32	105					
Arsenic	98.379	1.0	125.0	0	78.7	49	106					
Barium	176.148	1.0	125.0	82.27	75.1	31	133					
Beryllium	101.957	1.0	125.0	0	81.6	56	106					
Cadmium	96.319	1.0	125.0	0.5821	76.6	51	103					
Chromium	108.293	1.0	125.0	15.54	74.2	45	114					
Cobalt	107.108	1.0	125.0	8.600	78.8	52	106					
Copper	127.719	2.0	125.0	33.06	75.7	54	125					
Lead	112.697	1.0	125.0	17.23	76.4	34	126					
Molybdenum	103.847	1.0	125.0	1.687	81.7	54	106					
Nickel	105.451	1.0	125.0	11.48	75.2	45	111					
Selenium	95.474	1.0	125.0	0	76.4	47	104					
Silver	104.473	1.0	125.0	0	83.6	56	112					
Thallium	84.956	1.0	125.0	0	68.0	46	101					
Vanadium	138.189	1.0	125.0	37.26	80.7	54	114					
Zinc	157.397	1.0	125.0	59.27	78.5	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

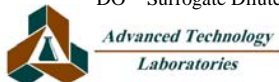
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>118913-005A-MSD</b>		SampType: <b>MSD</b>		TestCode: <b>6010_S</b>		Units: <b>mg/Kg</b>		Prep Date: <b>7/14/2011</b>		RunNo: <b>134951</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>74243</b>		TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/14/2011</b>		SeqNo: <b>2208465</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	99.534	2.0	125.0	0.2119	79.5	32	105	87.20	13.2	20	
Arsenic	109.825	1.0	125.0	0	87.9	49	106	98.38	11.0	20	
Barium	200.715	1.0	125.0	82.27	94.8	31	133	176.1	13.0	20	
Beryllium	113.942	1.0	125.0	0	91.2	56	106	102.0	11.1	20	
Cadmium	107.364	1.0	125.0	0.5821	85.4	51	103	96.32	10.8	20	
Chromium	122.661	1.0	125.0	15.54	85.7	45	114	108.3	12.4	20	
Cobalt	120.139	1.0	125.0	8.600	89.2	52	106	107.1	11.5	20	
Copper	147.774	2.0	125.0	33.06	91.8	54	125	127.7	14.6	20	
Lead	128.562	1.0	125.0	17.23	89.1	34	126	112.7	13.2	20	
Molybdenum	115.152	1.0	125.0	1.687	90.8	54	106	103.8	10.3	20	
Nickel	117.978	1.0	125.0	11.48	85.2	45	111	105.5	11.2	20	
Selenium	105.145	1.0	125.0	0	84.1	47	104	95.47	9.64	20	
Silver	117.496	1.0	125.0	0	94.0	56	112	104.5	11.7	20	
Thallium	92.903	1.0	125.0	0	74.3	46	101	84.96	8.94	20	
Vanadium	157.777	1.0	125.0	37.26	96.4	54	114	138.2	13.2	20	
Zinc	175.788	1.0	125.0	59.27	93.2	28	125	157.4	11.0	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7471\_S**

Sample ID: <b>MB-74242</b>	SampType: <b>MBLK</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134949</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74242</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208396</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-74242</b>	SampType: <b>LCS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134949</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74242</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208397</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.780 0.10 0.8300 0 94.0 80 120

Sample ID: <b>118913-005A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134949</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74242</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208398</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

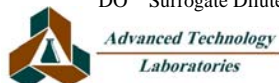
Mercury 0.740 0.10 0.8300 0.01308 87.6 70 130

Sample ID: <b>118913-005A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7471_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/14/2011</b>	RunNo: <b>134949</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74242</b>	TestNo: <b>EPA 7471A</b>		Analysis Date: <b>7/14/2011</b>	SeqNo: <b>2208399</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.740 0.10 0.8300 0.01308 87.6 70 130 0.7403 0.0109 20

**Qualifiers:**

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



**CLIENT:** Mactec  
**Work Order:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>MB-74194</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/12/2011</b>	RunNo: <b>134826</b>						
Client ID: <b>PBS</b>	Batch ID: <b>74194</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/13/2011</b>	SeqNo: <b>2207753</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	100.250		80.00		125	63	152				

Sample ID: <b>LCS-74194</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/12/2011</b>	RunNo: <b>134826</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>74194</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/13/2011</b>	SeqNo: <b>2207754</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1143.980	10	1000	0	114	76	139				
Surr: p-Terphenyl	88.190		80.00		110	63	152				

Sample ID: <b>118862-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/12/2011</b>	RunNo: <b>134826</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74194</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/13/2011</b>	SeqNo: <b>2207755</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

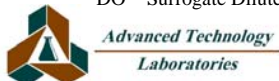
DRO	1119.240	10	1000	0	112	60	158				
Surr: p-Terphenyl	82.740		80.00		103	63	152				

Sample ID: <b>118862-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_DM H</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/12/2011</b>	RunNo: <b>134826</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>74194</b>	TestNo: <b>EPA 8015B(M LUFT</b>		Analysis Date: <b>7/13/2011</b>	SeqNo: <b>2207756</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1081.100	10	1000	0	108	60	158	1119	3.47	20	
Surr: p-Terphenyl	84.400		80.00		106	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

Sample ID: <b>E110712LC1</b>	SampType: <b>LCS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209078</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.970	1.0	5.000	0	99.4	70	130				
Surr: Bromofluorobenzene (FID)	116.735		100.0		117	51	161				

Sample ID: <b>E110712MB1MS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209079</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.685	1.0	5.000	0	93.7	41	146				
Surr: Bromofluorobenzene (FID)	113.999		100.0		114	51	161				

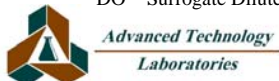
Sample ID: <b>E110712MB1MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209080</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.640	1.0	5.000	0	92.8	41	146	4.685	0.965	20	
Surr: Bromofluorobenzene (FID)	112.224		100.0		112	51	161		0	0	

Sample ID: <b>E110712MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209081</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)	104.606		100.0		105	51	161				

Sample ID: <b>118728-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209086</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.468	1.0	5.000	0	89.4	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

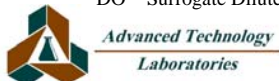
**TestCode: 8015\_S\_G 5035P**

Sample ID: <b>118728-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209086</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	129.847		100.0		130	51	161				

Sample ID: <b>118728-002AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015_S_G 50</b>	Units: <b>mg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8015B(M)</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209087</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.972	1.0	5.000	0	99.4	41	146	4.468	10.7	20	
Surr: Bromofluorobenzene (FID)	159.973		100.0		160	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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**CLIENT:** Mactec  
**Work Order:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

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

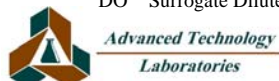
Sample ID: <b>E110712LC2</b>	SampType: <b>LCS</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209088</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	88.483	5.0	100.0	0	88.5	70	130				
Ethylbenzene	92.473	5.0	100.0	0	92.5	70	130				
m,p-Xylene	186.761	10	200.0	0	93.4	70	130				
o-Xylene	95.021	5.0	100.0	0	95.0	70	130				
Toluene	91.862	5.0	100.0	0	91.9	70	130				
Surr: Bromofluorobenzene (PID)	87.162		100.0		87.2	33	163				

Sample ID: <b>E110712LC2</b>	SampType: <b>LCSD</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209089</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	83.939	5.0	100.0	0	83.9	70	130	88.48	5.27	20	
Ethylbenzene	86.530	5.0	100.0	0	86.5	70	130	92.47	6.64	20	
m,p-Xylene	174.854	10	200.0	0	87.4	70	130	186.8	6.59	20	
o-Xylene	88.879	5.0	100.0	0	88.9	70	130	95.02	6.68	20	
Toluene	86.654	5.0	100.0	0	86.7	70	130	91.86	5.83	20	
Surr: Bromofluorobenzene (PID)	82.803		100.0		82.8	33	163		0	0	

Sample ID: <b>E110712MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8021_S_B 50</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134903</b>						
Client ID: <b>PBS</b>	Batch ID: <b>E11VS257</b>	TestNo: <b>EPA 8021B</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2209092</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)	81.339		100.0		81.3	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

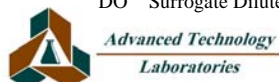
**TestCode: 8021\_S\_B 5035P**

Sample ID: <b>118728-002AMS</b>		SampType: <b>MS</b>		TestCode: <b>8021_S_B 50</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134903</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>E11VS257</b>		TestNo: <b>EPA 8021B</b>		Analysis Date: <b>7/12/2011</b>		SeqNo: <b>2209097</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	25.056	5.0	22.15	0	113	44	115					
Ethylbenzene	40.733	5.0	42.30	0	96.3	49	95				S	
m,p-Xylene	137.623	10	180.2	0	76.4	55	98					
o-Xylene	50.642	5.0	64.80	0	78.2	50	93					
Toluene	126.435	5.0	172.6	0	73.2	46	113					
Surr: Bromofluorobenzene (PID)	104.174		100.0		104	33	163					

Sample ID: <b>118728-002AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8021_S_B 50</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134903</b>		
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>E11VS257</b>		TestNo: <b>EPA 8021B</b>		Analysis Date: <b>7/12/2011</b>		SeqNo: <b>2209098</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	29.388	5.0	22.15	0	133	44	115	25.06	15.9	20	S	
Ethylbenzene	46.762	5.0	42.30	0	111	49	95	40.73	13.8	20	S	
m,p-Xylene	158.522	10	180.2	0	88.0	55	98	137.6	14.1	20		
o-Xylene	60.196	5.0	64.80	0	92.9	50	93	50.64	17.2	20		
Toluene	147.214	5.0	172.6	0	85.3	46	113	126.4	15.2	20		
Surr: Bromofluorobenzene (PID)	109.950		100.0		110	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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

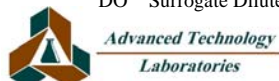
Sample ID: <b>T110712LCS1</b>		SampType: <b>LCS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134884</b>	
Client ID: <b>LCSS</b>		Batch ID: <b>T11VS126</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>				SeqNo: <b>2207587</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	44.440	5.0	50.00	0	88.9	70	130				
Benzene	95.820	5.0	100.0	0	95.8	70	130				
Chlorobenzene	52.790	5.0	50.00	0	106	70	130				
MTBE	47.550	5.0	50.00	0	95.1	70	130				
Toluene	97.630	5.0	100.0	0	97.6	70	130				
Trichloroethene	49.280	5.0	50.00	0	98.6	70	130				
Surr: 1,2-Dichloroethane-d4	45.450		50.00		90.9	65	141				
Surr: 4-Bromofluorobenzene	45.380		50.00		90.8	57	134				
Surr: Dibromofluoromethane	47.520		50.00		95.0	70	128				
Surr: Toluene-d8	46.380		50.00		92.8	72	123				

Sample ID: <b>T110712MB1MS</b>		SampType: <b>MS</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134884</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>T11VS126</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>				SeqNo: <b>2207588</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	45.880	5.0	50.00	0	91.8	70	130				
Benzene	95.980	5.0	100.0	0	96.0	70	130				
Chlorobenzene	51.740	5.0	50.00	0	103	70	130				
MTBE	50.190	5.0	50.00	0	100	70	130				
Toluene	100.110	5.0	100.0	0	100	70	130				
Trichloroethene	50.350	5.0	50.00	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	46.250		50.00		92.5	65	141				
Surr: 4-Bromofluorobenzene	41.210		50.00		82.4	57	134				
Surr: Dibromofluoromethane	48.140		50.00		96.3	70	128				
Surr: Toluene-d8	46.770		50.00		93.5	72	123				

Sample ID: <b>T110712MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134884</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>T11VS126</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>				SeqNo: <b>2207589</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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

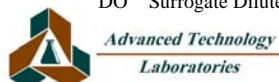
**TestCode: 8260\_S\_5035**

Sample ID: <b>T110712MB1MSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134884</b>	
Client ID: <b>ZZZZZZ</b>		Batch ID: <b>T11VS126</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>				SeqNo: <b>2207589</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	46.420	5.0	50.00	0	92.8	70	130	45.88	1.17	20	
Benzene	97.590	5.0	100.0	0	97.6	70	130	95.98	1.66	20	
Chlorobenzene	55.230	5.0	50.00	0	110	70	130	51.74	6.53	20	
MTBE	51.460	5.0	50.00	0	103	70	130	50.19	2.50	20	
Toluene	104.050	5.0	100.0	0	104	70	130	100.1	3.86	20	
Trichloroethene	51.200	5.0	50.00	0	102	70	130	50.35	1.67	20	
Surr: 1,2-Dichloroethane-d4	45.100		50.00		90.2	65	141		0	0	
Surr: 4-Bromofluorobenzene	42.600		50.00		85.2	57	134		0	0	
Surr: Dibromofluoromethane	48.670		50.00		97.3	70	128		0	0	
Surr: Toluene-d8	45.930		50.00		91.9	72	123		0	0	

Sample ID: <b>T110712MB1</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_S_5035</b>		Units: <b>µg/Kg</b>		Prep Date:		RunNo: <b>134884</b>	
Client ID: <b>PBS</b>		Batch ID: <b>T11VS126</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>				SeqNo: <b>2207590</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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| DO Surrogate Diluted Out                          | Calculations are based on raw values   |  |



**CLIENT:** Mactec  
**Work Order:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>T110712MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134884</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS126</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2207590</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:**

- |   |  |  |
|---|--|--|
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| 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:** 118856  
**Project:** METRO WESTSIDE EXTENSION, 4953-10-1

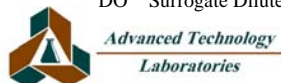
## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S\_5035**

Sample ID: <b>T110712MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S_5035</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>134884</b>						
Client ID: <b>PBS</b>	Batch ID: <b>T11VS126</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>7/12/2011</b>	SeqNo: <b>2207590</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	46.690		50.00		93.4	65	141				
Surr: 4-Bromofluorobenzene	44.010		50.00		88.0	57	134				
Surr: Dibromofluoromethane	47.810		50.00		95.6	70	128				
Surr: Toluene-d8	47.160		50.00		94.3	72	123				

**Qualifiers:**

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