

Fernando Diwa

From: Rachelle Arada
Sent: Wednesday, July 13, 2011 8:50 AM
To: Fernando Diwa
Cc: customer.relations
Subject: FW: Additional Analyses Request
Attachments: E-116 (Additional Analyses).pdf

Please log accordingly.

From: Fraychineaud, Matt [<mailto:MFRAYCHINEAUD@mactec.com>]
Sent: Wednesday, July 13, 2011 8:42 AM
To: Rachelle Arada
Subject: Additional Analyses Request

Hi Rachelle:

Please see the attached COC to this e-mail. I would like to analyze the designated sample (E-116-55) for the requested analyses. I've highlighted the modifications to the original COC. These samples were picked up yesterday at 2:00 PM.

Note: For some reason, I think there may have been two stainless steel sleeves for the subject sample. If so, can you make sure that you collect the sample from the sleeve that is completely full (the lower sleeve from the sampling barrel). I think the other sleeve is only partially full with soil. Also, I do realize that the sample was not preserved using method 5035 for volatile analyses. However, it has been well chilled in an ice chest since the time it was collected.

Thanks and please call if you have any questions.

Matt

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

July 22, 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.: 118934

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 14, 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: 118934

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)/8021B

Samples 118934-001D and 118934-002D, surrogate recovery biased low possibly due to matrix interferences.

Sample 118934-003E, surrogate recovery biased high possibly due to matrix interferences.

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

Samples 118934-001G, 118934-002D and 118934-003G, surrogate diluted out.

Analytical Comments for EPA 8260B

Samples 118934-002A and 118934-003A, surrogate recovery biased high possibly due to matrix interferences.

Analytical Comments for EPA 8270C

Sample 118934-003G, dilution was necessary due to high concentrations of non-target extractable analytes.

Sample 118934-003G, surrogates diluted out.

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT: Mactec	Client Sample ID: E-117-42.5
Lab Order: 118934	Collection Date: 7/13/2011 1:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10	Matrix: SOIL
Lab ID: 118934-001A	

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL
1,1,1,2-Tetrachloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1,1-Trichloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1,2,2-Tetrachloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1,2-Trichloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1-Dichloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1-Dichloroethene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,1-Dichloropropene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2,3-Trichlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2,3-Trichloropropane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2,4-Trichlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2,4-Trimethylbenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2-Dibromo-3-chloropropane	ND	7.7	µg/Kg 1 7/16/2011 01:02 AM
1,2-Dibromoethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2-Dichlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2-Dichloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,2-Dichloropropane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,3,5-Trimethylbenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,3-Dichlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,3-Dichloropropane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
1,4-Dichlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
2,2-Dichloropropane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
2-Chlorotoluene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
4-Chlorotoluene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
4-Isopropyltoluene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Benzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Bromobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Bromodichloromethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Bromoform	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Bromomethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Carbon tetrachloride	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Chlorobenzene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Chloroethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Chloroform	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
Chloromethane	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM
cis-1,2-Dichloroethene	ND	3.8	µg/Kg 1 7/16/2011 01:02 AM

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-42.5
Lab Order:	118934	Collection Date:	7/13/2011 1:05:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-001A		

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Di-isopropyl ether	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Dibromochloromethane	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Dibromomethane	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Dichlorodifluoromethane	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Ethyl Tert-butyl ether	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Ethylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Hexachlorobutadiene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Isopropylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
m,p-Xylene	ND	7.7	µg/Kg	1	7/16/2011 01:02 AM
Methylene chloride	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
MTBE	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
n-Butylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
n-Propylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Naphthalene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
o-Xylene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
sec-Butylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Styrene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Tert-amyl methyl ether	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Tert-Butanol	ND	77	µg/Kg	1	7/16/2011 01:02 AM
tert-Butylbenzene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Tetrachloroethene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Toluene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
trans-1,2-Dichloroethene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Trichloroethene	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Trichlorofluoromethane	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Vinyl chloride	ND	3.8	µg/Kg	1	7/16/2011 01:02 AM
Surr: 1,2-Dichloroethane-d4	133	65-141	%REC	1	7/16/2011 01:02 AM
Surr: 4-Bromofluorobenzene	124	57-134	%REC	1	7/16/2011 01:02 AM
Surr: Dibromofluoromethane	119	70-128	%REC	1	7/16/2011 01:02 AM
Surr: Toluene-d8	93.5	72-123	%REC	1	7/16/2011 01:02 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
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	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: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-42.5
Lab Order:	118934	Collection Date:	7/13/2011 1:05:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-001D		

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

EPA 8015B(M)

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
GRO	1.5	0.73	mg/Kg	1	7/21/2011 04:20 PM
Surr: Bromofluorobenzene (FID)	47.6	51-161	S %REC	1	7/21/2011 04:20 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
Benzene	ND	3.7	µg/Kg	1	7/21/2011 04:20 PM
Ethylbenzene	ND	3.7	µg/Kg	1	7/21/2011 04:20 PM
m,p-Xylene	ND	7.3	µg/Kg	1	7/21/2011 04:20 PM
o-Xylene	ND	3.7	µg/Kg	1	7/21/2011 04:20 PM
Toluene	ND	3.7	µg/Kg	1	7/21/2011 04:20 PM
Surr: Bromofluorobenzene (PID)	18.5	33-163	S %REC	1	7/21/2011 04:20 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
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ANALYTICAL RESULTS
 Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-42.5
Lab Order:	118934	Collection Date:	7/13/2011 1:05:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-001G		

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_110718A	QC Batch: 74335				PrepDate: 7/18/2011	Analyst: CBR
DRO	7600	250		mg/Kg	25	7/19/2011 09:00 AM
ORO	12000	250		mg/Kg	25	7/19/2011 09:00 AM
Surr: p-Terphenyl	0	63-152	SDO	%REC	25	7/19/2011 09:00 AM

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-50
Lab Order:	118934	Collection Date:	7/13/2011 1:45:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-002A		

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL		
1,1,1,2-Tetrachloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1,1-Trichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1,2,2-Tetrachloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1,2-Trichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1-Dichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1-Dichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,1-Dichloropropene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2,3-Trichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2,3-Trichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2,4-Trichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2,4-Trimethylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2-Dibromo-3-chloropropane	ND	7.7	µg/Kg	1	7/16/2011 01:19 AM
1,2-Dibromoethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2-Dichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,2-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,3,5-Trimethylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,3-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,3-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
1,4-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
2,2-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
2-Chlorotoluene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
4-Chlorotoluene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
4-Isopropyltoluene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Benzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Bromobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Bromodichloromethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Bromoform	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Bromomethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Carbon tetrachloride	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Chlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Chloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Chloroform	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
Chloromethane	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM
cis-1,2-Dichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:19 AM

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-50
Lab Order:	118934	Collection Date:	7/13/2011 1:45:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-002A		

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL
cis-1,3-Dichloropropene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Di-isopropyl ether	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Dibromochloromethane	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Dibromomethane	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Dichlorodifluoromethane	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Ethyl Tert-butyl ether	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Ethylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Hexachlorobutadiene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Isopropylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
m,p-Xylene	ND	7.7	µg/Kg 1 7/16/2011 01:19 AM
Methylene chloride	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
MTBE	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
n-Butylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
n-Propylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Naphthalene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
o-Xylene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
sec-Butylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Styrene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Tert-amyl methyl ether	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Tert-Butanol	ND	77	µg/Kg 1 7/16/2011 01:19 AM
tert-Butylbenzene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Tetrachloroethene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Toluene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
trans-1,2-Dichloroethene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Trichloroethene	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Trichlorofluoromethane	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Vinyl chloride	ND	3.9	µg/Kg 1 7/16/2011 01:19 AM
Surr: 1,2-Dichloroethane-d4	118	65-141	%REC 1 7/16/2011 01:19 AM
Surr: 4-Bromofluorobenzene	158	57-134	%REC 1 7/16/2011 01:19 AM
Surr: Dibromofluoromethane	107	70-128	%REC 1 7/16/2011 01:19 AM
Surr: Toluene-d8	95.7	72-123	%REC 1 7/16/2011 01:19 AM

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



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Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-50
Lab Order:	118934	Collection Date:	7/13/2011 1:45:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-002D		

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

EPA 8015B(M)

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
GRO	2.5	0.81	mg/Kg	1	7/21/2011 04:42 PM
Surr: Bromofluorobenzene (FID)	98.1	51-161	%REC	1	7/21/2011 04:42 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
Benzene	ND	4.0	µg/Kg	1	7/21/2011 04:42 PM
Ethylbenzene	ND	4.0	µg/Kg	1	7/21/2011 04:42 PM
m,p-Xylene	53	8.1	µg/Kg	1	7/21/2011 04:42 PM
o-Xylene	ND	4.0	µg/Kg	1	7/21/2011 04:42 PM
Toluene	ND	4.0	µg/Kg	1	7/21/2011 04:42 PM
Surr: Bromofluorobenzene (PID)	16.8	33-163	%REC	1	7/21/2011 04:42 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: 22-Jul-11

CLIENT: Mactec **Client Sample ID:** E-117-50
Lab Order: 118934 **Collection Date:** 7/13/2011 1:45:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 118934-002G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS

EPA 3050B

EPA 6010B

RunID:	ICP8_110719G	QC Batch:	74375	PrepDate:	7/20/2011	Analyst:	CBB
Antimony	ND	2.0	mg/Kg	1	7/20/2011 03:27 PM		
Arsenic	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Barium	23	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Beryllium	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Cadmium	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Chromium	9.6	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Cobalt	2.4	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Copper	3.3	2.0	mg/Kg	1	7/20/2011 03:27 PM		
Lead	1.3	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Molybdenum	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Nickel	13	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Selenium	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Silver	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Thallium	ND	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Vanadium	20	1.0	mg/Kg	1	7/20/2011 03:27 PM		
Zinc	7.2	1.0	mg/Kg	1	7/20/2011 03:27 PM		

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

LUFT

EPA 8015B(M)

RunID:	GC16_110718A	QC Batch:	74335	PrepDate:	7/18/2011	Analyst:	CBR
DRO	37000	500	mg/Kg	50	7/19/2011 07:04 AM		
ORO	57000	500	mg/Kg	50	7/19/2011 07:04 AM		
Surr: p-Terphenyl	0	63-152	SDO %REC	50	7/19/2011 07:04 AM		

MERCURY BY COLD VAPOR TECHNIQUE

EPA 7471A

RunID:	AA5_110720A	QC Batch:	74362	PrepDate:	7/19/2011	Analyst:	VV
Mercury	ND	0.10	mg/Kg	1	7/20/2011 11:04 AM		

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT: Mactec	Client Sample ID: E-117-55
Lab Order: 118934	Collection Date: 7/13/2011 2:25:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10	Matrix: SOIL
Lab ID: 118934-003A	

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL		
1,1,1,2-Tetrachloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1,1-Trichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1,2,2-Tetrachloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1,2-Trichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1-Dichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1-Dichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,1-Dichloropropene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2,3-Trichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2,3-Trichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2,4-Trichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2,4-Trimethylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2-Dibromo-3-chloropropane	ND	7.8	µg/Kg	1	7/16/2011 01:37 AM
1,2-Dibromoethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2-Dichloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,2-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,3,5-Trimethylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,3-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,3-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
1,4-Dichlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
2,2-Dichloropropane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
2-Chlorotoluene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
4-Chlorotoluene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
4-Isopropyltoluene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Benzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Bromobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Bromodichloromethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Bromoform	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Bromomethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Carbon tetrachloride	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Chlorobenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Chloroethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Chloroform	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Chloromethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
cis-1,2-Dichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-55
Lab Order:	118934	Collection Date:	7/13/2011 2:25:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-003A		

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

EPA 8260B

RunID: MS4_110715B	QC Batch: K11VS189	PrepDate: 7/13/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Di-isopropyl ether	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Dibromochloromethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Dibromomethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Dichlorodifluoromethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Ethyl Tert-butyl ether	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Ethylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Hexachlorobutadiene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Isopropylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
m,p-Xylene	ND	7.8	µg/Kg	1	7/16/2011 01:37 AM
Methylene chloride	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
MTBE	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
n-Butylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
n-Propylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Naphthalene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
o-Xylene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
sec-Butylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Styrene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Tert-amyl methyl ether	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Tert-Butanol	ND	78	µg/Kg	1	7/16/2011 01:37 AM
tert-Butylbenzene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Tetrachloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Toluene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
trans-1,2-Dichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Trichloroethene	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Trichlorofluoromethane	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Vinyl chloride	ND	3.9	µg/Kg	1	7/16/2011 01:37 AM
Surr: 1,2-Dichloroethane-d4	115	65-141	%REC	1	7/16/2011 01:37 AM
Surr: 4-Bromofluorobenzene	366	57-134	%REC	1	7/16/2011 01:37 AM
Surr: Dibromofluoromethane	105	70-128	%REC	1	7/16/2011 01:37 AM
Surr: Toluene-d8	94.3	72-123	%REC	1	7/16/2011 01:37 AM

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	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: 22-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-117-55
Lab Order:	118934	Collection Date:	7/13/2011 2:25:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118934-003E		

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

EPA 8015B(M)

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
GRO	4.0	0.74	mg/Kg	1	7/21/2011 10:44 PM
Surr: Bromofluorobenzene (FID)	289	51-161	S %REC	1	7/21/2011 10:44 PM

VOLATILE ORGANIC COMPOUNDS BY GC/PID

EPA 8021B

RunID: GC6_110721A	QC Batch: 111VS018	PrepDate: 7/13/2011	Analyst: TP		
Benzene	ND	3.7	µg/Kg	1	7/21/2011 10:44 PM
Ethylbenzene	ND	3.7	µg/Kg	1	7/21/2011 10:44 PM
m,p-Xylene	ND	7.4	µg/Kg	1	7/21/2011 10:44 PM
o-Xylene	ND	3.7	µg/Kg	1	7/21/2011 10:44 PM
Toluene	ND	3.7	µg/Kg	1	7/21/2011 10:44 PM
Surr: Bromofluorobenzene (PID)	91.7	33-163	%REC	1	7/21/2011 10:44 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: 22-Jul-11

CLIENT: Mactec **Client Sample ID:** E-117-55
Lab Order: 118934 **Collection Date:** 7/13/2011 2:25:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 118934-003G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
LUFT			EPA 8015B(M)			
RunID: GC16_110718A	QC Batch: 74335			PrepDate: 7/18/2011		Analyst: CBR
DRO	49000	500		mg/Kg	50	7/19/2011 08:32 AM
ORO	70000	500		mg/Kg	50	7/19/2011 08:32 AM
Surr: p-Terphenyl	0	63-152	SDO	%REC	50	7/19/2011 08:32 AM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
EPA 3550B			EPA 8270C			
RunID: MS6_110721B	QC Batch: 74404			PrepDate: 7/20/2011		Analyst: JSD
1,2,4-Trichlorobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
1,2-Dichlorobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
1,3-Dichlorobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
1,4-Dichlorobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2,4,5-Trichlorophenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2,4,6-Trichlorophenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2,4-Dichlorophenol	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
2,4-Dimethylphenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2,4-Dinitrophenol	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
2,4-Dinitrotoluene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2,6-Dinitrotoluene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2-Chloronaphthalene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2-Chlorophenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2-Methylnaphthalene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2-Methylphenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
2-Nitroaniline	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
2-Nitrophenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
3,3'-Dichlorobenzidine	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
3-Nitroaniline	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
4,6-Dinitro-2-methylphenol	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
4-Bromophenyl-phenylether	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
4-Chloro-3-methylphenol	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
4-Chloroaniline	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
4-Chlorophenyl-phenylether	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
4-Methylphenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
4-Nitroaniline	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
4-Nitrophenol	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
Acenaphthene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Acenaphthylene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM

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



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ANALYTICAL RESULTS

Print Date: 22-Jul-11

CLIENT: Mactec **Client Sample ID:** E-117-55
Lab Order: 118934 **Collection Date:** 7/13/2011 2:25:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 118934-003G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B			EPA 8270C		
RunID: MS6_110721B	QC Batch: 74404			PrepDate: 7/20/2011		Analyst: JSD
Anthracene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzidine (M)	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
Benzo(a)anthracene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzo(a)pyrene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzo(b)fluoranthene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzo(g,h,i)perylene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzo(k)fluoranthene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Benzoic acid	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
Benzyl alcohol	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
Bis(2-chloroethoxy)methane	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Bis(2-chloroethyl)ether	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Bis(2-chloroisopropyl)ether	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Bis(2-ethylhexyl)phthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Butylbenzylphthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Chrysene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Di-n-butylphthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Di-n-octylphthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Dibenz(a,h)anthracene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Dibenzofuran	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Diethylphthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Dimethylphthalate	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Fluoranthene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Fluorene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Hexachlorobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Hexachlorobutadiene	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
Hexachlorocyclopentadiene	ND	330000		µg/Kg	50	7/22/2011 02:51 AM
Hexachloroethane	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Indeno(1,2,3-cd)pyrene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Isophorone	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
N-Nitrosodi-n-propylamine	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
N-Nitrosodiphenylamine	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Naphthalene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Nitrobenzene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Pentachlorophenol	ND	820000		µg/Kg	50	7/22/2011 02:51 AM
Phenanthrene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM

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



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ANALYTICAL RESULTS
 Print Date: 22-Jul-11

CLIENT: Mactec	Client Sample ID: E-117-55
Lab Order: 118934	Collection Date: 7/13/2011 2:25:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10	Matrix: SOIL
Lab ID: 118934-003G	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B			EPA 8270C		
RunID: MS6_110721B	QC Batch: 74404			PrepDate: 7/20/2011		Analyst: JSD
Phenol	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Pyrene	ND	160000		µg/Kg	50	7/22/2011 02:51 AM
Surr: 1,2-Dichlorobenzene-d4	0	45-105	SDO	%REC	50	7/22/2011 02:51 AM
Surr: 2,4,6-Tribromophenol	0	41-129	SDO	%REC	50	7/22/2011 02:51 AM
Surr: 2-Chlorophenol-d4	0	55-108	SDO	%REC	50	7/22/2011 02:51 AM
Surr: 2-Fluorobiphenyl	0	56-114	SDO	%REC	50	7/22/2011 02:51 AM
Surr: 2-Fluorophenol	0	50-108	SDO	%REC	50	7/22/2011 02:51 AM
Surr: 4-Terphenyl-d14	0	59-141	SDO	%REC	50	7/22/2011 02:51 AM
Surr: Nitrobenzene-d5	0	45-114	SDO	%REC	50	7/22/2011 02:51 AM
Surr: Phenol-d5	0	46-118	SDO	%REC	50	7/22/2011 02:51 AM

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



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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

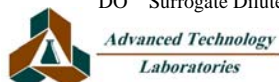
TestCode: 6010_S

Sample ID: MB-74375	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 7/20/2011	RunNo: 135152						
Client ID: PBS	Batch ID: 74375	TestNo: EPA 6010B EPA 3050B		Analysis Date: 7/20/2011	SeqNo: 2212482						
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	0.243	1.0									

Sample ID: LCS-74375	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 7/20/2011	RunNo: 135152						
Client ID: LCSS	Batch ID: 74375	TestNo: EPA 6010B EPA 3050B		Analysis Date: 7/20/2011	SeqNo: 2212483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	45.286	2.0	50.00	0	90.6	80	120				
Arsenic	45.800	1.0	50.00	0	91.6	80	120				
Barium	47.111	1.0	50.00	0	94.2	80	120				
Beryllium	45.798	1.0	50.00	0	91.6	80	120				
Cadmium	46.473	1.0	50.00	0	92.9	80	120				
Chromium	43.384	1.0	50.00	0	86.8	80	120				
Cobalt	47.465	1.0	50.00	0	94.9	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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

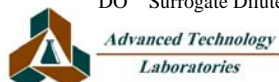
TestCode: 6010_S

Sample ID: LCS-74375		SampType: LCS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 7/20/2011		RunNo: 135152		
Client ID: LCSS		Batch ID: 74375		TestNo: EPA 6010B EPA 3050B				Analysis Date: 7/20/2011		SeqNo: 2212483		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	45.849	2.0	50.00	0	91.7	80	120					
Lead	46.742	1.0	50.00	0	93.5	80	120					
Molybdenum	48.222	1.0	50.00	0	96.4	80	120					
Nickel	45.911	1.0	50.00	0	91.8	80	120					
Selenium	43.672	1.0	50.00	0	87.3	80	120					
Silver	43.511	1.0	50.00	0	87.0	80	120					
Thallium	44.595	1.0	50.00	0	89.2	80	120					
Vanadium	46.592	1.0	50.00	0	93.2	80	120					
Zinc	47.714	1.0	50.00	0.2432	94.9	80	120					

Sample ID: 118976-026A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 7/20/2011		RunNo: 135152		
Client ID: ZZZZZZ		Batch ID: 74375		TestNo: EPA 6010B EPA 3050B				Analysis Date: 7/20/2011		SeqNo: 2212497		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	114.221	2.0	125.0	0	91.4	32	105					
Arsenic	118.678	1.0	125.0	0	94.9	49	106					
Barium	153.993	1.0	125.0	46.99	85.6	31	133					
Beryllium	117.053	1.0	125.0	0	93.6	56	106					
Cadmium	118.095	1.0	125.0	0.1932	94.3	51	103					
Chromium	113.101	1.0	125.0	2.994	88.1	45	114					
Cobalt	123.562	1.0	125.0	4.311	95.4	52	106					
Copper	123.664	2.0	125.0	3.027	96.5	54	125					
Lead	120.463	1.0	125.0	1.191	95.4	34	126					
Molybdenum	121.094	1.0	125.0	0	96.9	54	106					
Nickel	117.584	1.0	125.0	2.092	92.4	45	111					
Selenium	114.650	1.0	125.0	0	91.7	47	104					
Silver	116.922	1.0	125.0	0	93.5	56	112					
Thallium	109.623	1.0	125.0	0	87.7	46	101					
Vanadium	137.728	1.0	125.0	22.02	92.6	54	114					
Zinc	133.858	1.0	125.0	19.03	91.9	28	125					

Qualifiers:

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



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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

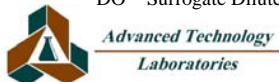
ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: 118976-026A-MSD		SampType: MSD		TestCode: 6010_S		Units: mg/Kg		Prep Date: 7/20/2011		RunNo: 135152	
Client ID: ZZZZZZ		Batch ID: 74375		TestNo: EPA 6010B EPA 3050B		Analysis Date: 7/20/2011		SeqNo: 2212498			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	104.884	2.0	125.0	0	83.9	32	105	114.2	8.52	20	
Arsenic	108.562	1.0	125.0	0	86.8	49	106	118.7	8.90	20	
Barium	150.431	1.0	125.0	46.99	82.7	31	133	154.0	2.34	20	
Beryllium	109.915	1.0	125.0	0	87.9	56	106	117.1	6.29	20	
Cadmium	110.202	1.0	125.0	0.1932	88.0	51	103	118.1	6.91	20	
Chromium	105.954	1.0	125.0	2.994	82.4	45	114	113.1	6.53	20	
Cobalt	116.163	1.0	125.0	4.311	89.5	52	106	123.6	6.17	20	
Copper	116.853	2.0	125.0	3.027	91.1	54	125	123.7	5.66	20	
Lead	111.117	1.0	125.0	1.191	87.9	34	126	120.5	8.07	20	
Molybdenum	111.880	1.0	125.0	0	89.5	54	106	121.1	7.91	20	
Nickel	109.675	1.0	125.0	2.092	86.1	45	111	117.6	6.96	20	
Selenium	105.037	1.0	125.0	0	84.0	47	104	114.6	8.75	20	
Silver	109.550	1.0	125.0	0	87.6	56	112	116.9	6.51	20	
Thallium	98.865	1.0	125.0	0	79.1	46	101	109.6	10.3	20	
Vanadium	132.817	1.0	125.0	22.02	88.6	54	114	137.7	3.63	20	
Zinc	129.958	1.0	125.0	19.03	88.7	28	125	133.9	2.96	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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-74362	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/19/2011	RunNo: 135111						
Client ID: PBS	Batch ID: 74362	TestNo: EPA 7471A		Analysis Date: 7/20/2011	SeqNo: 2211490						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: LCS-74362	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/19/2011	RunNo: 135111						
Client ID: LCSS	Batch ID: 74362	TestNo: EPA 7471A		Analysis Date: 7/20/2011	SeqNo: 2211491						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.919 0.10 0.8300 0 111 80 120

Sample ID: 119004-006A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/19/2011	RunNo: 135111						
Client ID: ZZZZZ	Batch ID: 74362	TestNo: EPA 7471A		Analysis Date: 7/20/2011	SeqNo: 2211492						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

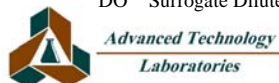
Mercury 0.894 0.10 0.8300 0 108 70 130

Sample ID: 119004-006A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/19/2011	RunNo: 135111						
Client ID: ZZZZZ	Batch ID: 74362	TestNo: EPA 7471A		Analysis Date: 7/20/2011	SeqNo: 2211493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.925 0.10 0.8300 0 111 70 130 0.8937 3.39 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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: MB-74335	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/18/2011	RunNo: 135050						
Client ID: PBS	Batch ID: 74335	TestNo: EPA 8015B(M LUFT		Analysis Date: 7/18/2011	SeqNo: 2210187						
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	114.670		80.00		143	63	152				

Sample ID: LCS-74335	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/18/2011	RunNo: 135050						
Client ID: LCSS	Batch ID: 74335	TestNo: EPA 8015B(M LUFT		Analysis Date: 7/18/2011	SeqNo: 2210188						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1263.960	10	1000	0	126	76	139				
Surr: p-Terphenyl	106.490		80.00		133	63	152				

Sample ID: 118965-001GMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/18/2011	RunNo: 135050						
Client ID: ZZZZZ	Batch ID: 74335	TestNo: EPA 8015B(M LUFT		Analysis Date: 7/18/2011	SeqNo: 2210192						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

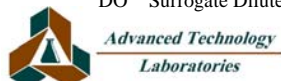
DRO	1225.540	10	1000	0	123	60	158				
Surr: p-Terphenyl	108.820		80.00		136	63	152				

Sample ID: 118965-001GMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/18/2011	RunNo: 135050						
Client ID: ZZZZZ	Batch ID: 74335	TestNo: EPA 8015B(M LUFT		Analysis Date: 7/18/2011	SeqNo: 2210193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	1243.910	10	1000	0	124	60	158	1226	1.49	20	
Surr: p-Terphenyl	105.910		80.00		132	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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: I110721MB2MS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135210						
Client ID: ZZZZZZ	Batch ID: I11VS018	TestNo: EPA 8015B(M)	Analysis Date: 7/21/2011	SeqNo: 2213778							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	5.176	1.0	5.000	0	104	41	146				
Surr: Bromofluorobenzene (FID)	98.726		100.0		98.7	51	161				

Sample ID: I110721LC2	SampType: LCS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135210						
Client ID: LCSS	Batch ID: I11VS018	TestNo: EPA 8015B(M)	Analysis Date: 7/21/2011	SeqNo: 2213779							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	9.946	1.0	10.00	0	99.5	70	130				
Surr: Bromofluorobenzene (FID)	111.362		100.0		111	51	161				

Sample ID: I110721MB2	SampType: MBLK	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135210						
Client ID: PBS	Batch ID: I11VS018	TestNo: EPA 8015B(M)	Analysis Date: 7/21/2011	SeqNo: 2213780							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

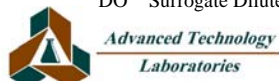
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	87.602		100.0		87.6	51	161				

Sample ID: I110721MB2MSD	SampType: MSD	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135210						
Client ID: ZZZZZZ	Batch ID: I11VS018	TestNo: EPA 8015B(M)	Analysis Date: 7/21/2011	SeqNo: 2213781							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	4.808	1.0	5.000	0	96.2	41	146	5.176	7.37	20	
Surr: Bromofluorobenzene (FID)	102.375		100.0		102	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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021_S_B 5035P

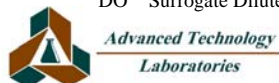
Sample ID: I110721LC1		SampType: LCS		TestCode: 8021_S_B 50		Units: µg/Kg		Prep Date:		RunNo: 135210		
Client ID: LCSS		Batch ID: I11VS018		TestNo: EPA 8021B		Analysis Date: 7/21/2011		SeqNo: 2213785				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	86.172	5.0	100.0	0	86.2	70	130					
Ethylbenzene	86.813	5.0	100.0	0	86.8	70	130					
m,p-Xylene	177.326	10	200.0	0	88.7	70	130					
o-Xylene	86.489	5.0	100.0	0	86.5	70	130					
Toluene	88.906	5.0	100.0	0	88.9	70	130					
Surr: Bromofluorobenzene (PID)	87.414		100.0		87.4	33	163					

Sample ID: I110721LC1		SampType: LCSD		TestCode: 8021_S_B 50		Units: µg/Kg		Prep Date:		RunNo: 135210		
Client ID: LCSS02		Batch ID: I11VS018		TestNo: EPA 8021B		Analysis Date: 7/21/2011		SeqNo: 2213786				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	87.785	5.0	100.0	0	87.8	70	130	86.17	1.85	20		
Ethylbenzene	89.500	5.0	100.0	0	89.5	70	130	86.81	3.05	20		
m,p-Xylene	184.235	10	200.0	0	92.1	70	130	177.3	3.82	20		
o-Xylene	91.228	5.0	100.0	0	91.2	70	130	86.49	5.33	20		
Toluene	90.950	5.0	100.0	0	91.0	70	130	88.91	2.27	20		
Surr: Bromofluorobenzene (PID)	83.899		100.0		83.9	33	163		0	0		

Sample ID: I110721MB2		SampType: MBLK		TestCode: 8021_S_B 50		Units: µg/Kg		Prep Date:		RunNo: 135210		
Client ID: PBS		Batch ID: I11VS018		TestNo: EPA 8021B		Analysis Date: 7/21/2011		SeqNo: 2213787				
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)	89.723		100.0		89.7	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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

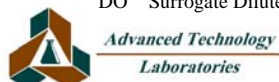
Sample ID: K110715LCS2		SampType: LCS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018		
Client ID: LCSS		Batch ID: K11VS189		TestNo: EPA 8260B				Analysis Date: 7/15/2011		SeqNo: 2209856		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	47.780	5.0	50.00	0	95.6	70	130					
Benzene	96.960	5.0	100.0	0	97.0	70	130					
Chlorobenzene	51.870	5.0	50.00	0	104	70	130					
MTBE	57.220	5.0	50.00	0	114	70	130					
Toluene	97.110	5.0	100.0	0	97.1	70	130					
Trichloroethene	48.720	5.0	50.00	0	97.4	70	130					
Surr: 1,2-Dichloroethane-d4	53.600		50.00		107	65	141					
Surr: 4-Bromofluorobenzene	46.230		50.00		92.5	57	134					
Surr: Dibromofluoromethane	50.770		50.00		102	70	128					
Surr: Toluene-d8	47.790		50.00		95.6	72	123					

Sample ID: K110715MB2MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018		
Client ID: ZZZZZ		Batch ID: K11VS189		TestNo: EPA 8260B				Analysis Date: 7/15/2011		SeqNo: 2209857		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	48.200	5.0	50.00	0	96.4	70	130					
Benzene	98.210	5.0	100.0	0	98.2	70	130					
Chlorobenzene	52.570	5.0	50.00	0	105	70	130					
MTBE	57.580	5.0	50.00	0	115	70	130					
Toluene	98.220	5.0	100.0	0	98.2	70	130					
Trichloroethene	50.520	5.0	50.00	0	101	70	130					
Surr: 1,2-Dichloroethane-d4	51.790		50.00		104	65	141					
Surr: 4-Bromofluorobenzene	46.080		50.00		92.2	57	134					
Surr: Dibromofluoromethane	50.250		50.00		101	70	128					
Surr: Toluene-d8	47.510		50.00		95.0	72	123					

Sample ID: K110715MB2MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018		
Client ID: ZZZZZ		Batch ID: K11VS189		TestNo: EPA 8260B				Analysis Date: 7/15/2011		SeqNo: 2209858		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110715MB2MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018	
Client ID: ZZZZZZ		Batch ID: K11VS189		TestNo: EPA 8260B		Analysis Date: 7/15/2011				SeqNo: 2209858	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	47.870	5.0	50.00	0	95.7	70	130	48.20	0.687	20	
Benzene	98.070	5.0	100.0	0	98.1	70	130	98.21	0.143	20	
Chlorobenzene	52.930	5.0	50.00	0	106	70	130	52.57	0.682	20	
MTBE	58.280	5.0	50.00	0	117	70	130	57.58	1.21	20	
Toluene	97.220	5.0	100.0	0	97.2	70	130	98.22	1.02	20	
Trichloroethene	49.580	5.0	50.00	0	99.2	70	130	50.52	1.88	20	
Surr: 1,2-Dichloroethane-d4	52.830		50.00		106	65	141		0	0	
Surr: 4-Bromofluorobenzene	45.040		50.00		90.1	57	134		0	0	
Surr: Dibromofluoromethane	51.500		50.00		103	70	128		0	0	
Surr: Toluene-d8	47.650		50.00		95.3	72	123		0	0	

Sample ID: K110715MB2		SampType: MBLK		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018	
Client ID: PBS		Batch ID: K11VS189		TestNo: EPA 8260B		Analysis Date: 7/15/2011				SeqNo: 2209859	
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 | |



*Advanced Technology
Laboratories*

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

CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110715MB2	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135018						
Client ID: PBS	Batch ID: K11VS189	TestNo: EPA 8260B		Analysis Date: 7/15/2011	SeqNo: 2209859						
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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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

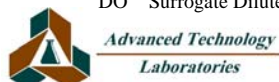
TestCode: 8260_S_5035

Sample ID: K110715MB2	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135018						
Client ID: PBS	Batch ID: K11VS189	TestNo: EPA 8260B		Analysis Date: 7/15/2011	SeqNo: 2209859						
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	55.740		50.00		111	65	141				
Surr: 4-Bromofluorobenzene	45.990		50.00		92.0	57	134				
Surr: Dibromofluoromethane	53.820		50.00		108	70	128				
Surr: Toluene-d8	50.210		50.00		100	72	123				

Sample ID: 118968-001AMS	SampType: MS	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135018						
Client ID: ZZZZZZ	Batch ID: K11VS189	TestNo: EPA 8260B		Analysis Date: 7/16/2011	SeqNo: 2209871						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	41.350	5.0	50.00	0	82.7	70	130				
Benzene	80.510	5.0	100.0	0	80.5	70	130				
Chlorobenzene	38.650	5.0	50.00	0	77.3	70	130				
MTBE	42.970	5.0	50.00	0	85.9	70	130				

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

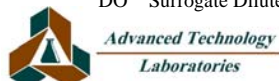
TestCode: 8260_S_5035

Sample ID: 118968-001AMS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018	
Client ID: ZZZZZZ		Batch ID: K11VS189		TestNo: EPA 8260B		Analysis Date: 7/16/2011				SeqNo: 2209871	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	78.320	5.0	100.0	0	78.3	70	130				
Trichloroethene	40.920	5.0	50.00	0	81.8	70	130				
Surr: 1,2-Dichloroethane-d4	50.630		50.00		101	65	141				
Surr: 4-Bromofluorobenzene	45.350		50.00		90.7	57	134				
Surr: Dibromofluoromethane	49.480		50.00		99.0	70	128				
Surr: Toluene-d8	47.740		50.00		95.5	72	123				

Sample ID: 118968-001AMSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135018	
Client ID: ZZZZZZ		Batch ID: K11VS189		TestNo: EPA 8260B		Analysis Date: 7/16/2011				SeqNo: 2209872	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	40.740	5.0	50.00	0	81.5	70	130	41.35	1.49	20	
Benzene	80.170	5.0	100.0	0	80.2	70	130	80.51	0.423	20	
Chlorobenzene	38.470	5.0	50.00	0	76.9	70	130	38.65	0.467	20	
MTBE	42.950	5.0	50.00	0	85.9	70	130	42.97	0.0466	20	
Toluene	77.360	5.0	100.0	0	77.4	70	130	78.32	1.23	20	
Trichloroethene	40.310	5.0	50.00	0	80.6	70	130	40.92	1.50	20	
Surr: 1,2-Dichloroethane-d4	52.210		50.00		104	65	141		0	0	
Surr: 4-Bromofluorobenzene	45.380		50.00		90.8	57	134		0	0	
Surr: Dibromofluoromethane	50.680		50.00		101	70	128		0	0	
Surr: Toluene-d8	48.370		50.00		96.7	72	123		0	0	

Qualifiers:

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



CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

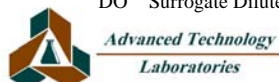
TestCode: 8270_S_FULL

Sample ID: LCS-74404	SampType: LCS	TestCode: 8270_S_FULL	Units: µg/Kg	Prep Date: 7/20/2011	RunNo: 135242						
Client ID: LCSS	Batch ID: 74404	TestNo: EPA 8270C	EPA 3550B	Analysis Date: 7/21/2011	SeqNo: 2213973						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2525.975	330	3330	0	75.9	67	107				
1,4-Dichlorobenzene	2342.310	330	3330	0	70.3	64	99				
2,4-Dinitrotoluene	2889.304	330	3330	0	86.8	81	122				
2-Chlorophenol	2328.643	330	3330	0	69.9	62	112				
4-Chloro-3-methylphenol	2902.971	660	3330	0	87.2	64	138				
4-Nitrophenol	3221.968	1600	3330	0	96.8	60	142				
Acenaphthene	2516.308	330	3330	0	75.6	70	116				
N-Nitrosodi-n-propylamine	2735.639	330	3330	0	82.2	73	115				
Pentachlorophenol	2487.642	1600	3330	0	74.7	59	135				
Phenol	2488.975	330	3330	0	74.7	61	120				
Pyrene	2575.308	330	3330	0	77.3	75	117				
Surr: 1,2-Dichlorobenzene-d4	2220.311		3330		66.7	45	105				
Surr: 2,4,6-Tribromophenol	2501.642		3330		75.1	41	129				
Surr: 2-Chlorophenol-d4	2331.310		3330		70.0	55	108				
Surr: 2-Fluorobiphenyl	2368.643		3330		71.1	56	114				
Surr: 2-Fluorophenol	2390.976		3330		71.8	50	108				
Surr: 4-Terphenyl-d14	2541.308		3330		76.3	59	141				
Surr: Nitrobenzene-d5	2592.974		3330		77.9	45	114				
Surr: Phenol-d5	2506.308		3330		75.3	46	118				

Sample ID: 118977-001AMS	SampType: MS	TestCode: 8270_S_FULL	Units: µg/Kg	Prep Date: 7/20/2011	RunNo: 135242						
Client ID: ZZZZZ	Batch ID: 74404	TestNo: EPA 8270C	EPA 3550B	Analysis Date: 7/21/2011	SeqNo: 2213974						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2378.667	330	3330	0	71.4	62	109				
1,4-Dichlorobenzene	2142.000	330	3330	0	64.3	57	99				
2,4-Dinitrotoluene	2960.000	330	3330	0	88.9	76	126				
2-Chlorophenol	2158.667	330	3330	0	64.8	52	120				
4-Chloro-3-methylphenol	2901.667	660	3330	0	87.1	63	137				
4-Nitrophenol	3210.667	1600	3330	0	96.4	52	144				

Qualifiers:

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



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

CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

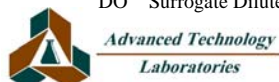
TestCode: 8270_S_FULL

Sample ID: 118977-001AMS		SampType: MS		TestCode: 8270_S_FULL		Units: µg/Kg		Prep Date: 7/20/2011		RunNo: 135242	
Client ID: ZZZZZ		Batch ID: 74404		TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011				SeqNo: 2213974	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	2530.667	330	3330	0	76.0	61	121				
N-Nitrosodi-n-propylamine	2739.000	330	3330	0	82.3	67	116				
Pentachlorophenol	2399.000	1600	3330	0	72.0	47	143				
Phenol	2355.333	330	3330	0	70.7	54	126				
Pyrene	2699.667	330	3330	0	81.1	68	121				
Surr: 1,2-Dichlorobenzene-d4	2004.000		3330		60.2	45	105				
Surr: 2,4,6-Tribromophenol	2478.333		3330		74.4	41	129				
Surr: 2-Chlorophenol-d4	2116.333		3330		63.6	55	108				
Surr: 2-Fluorobiphenyl	2320.000		3330		69.7	56	114				
Surr: 2-Fluorophenol	2122.333		3330		63.7	50	108				
Surr: 4-Terphenyl-d14	2568.667		3330		77.1	59	141				
Surr: Nitrobenzene-d5	2444.333		3330		73.4	45	114				
Surr: Phenol-d5	2313.000		3330		69.5	46	118				

Sample ID: 118977-001AMSD		SampType: MSD		TestCode: 8270_S_FULL		Units: µg/Kg		Prep Date: 7/20/2011		RunNo: 135242	
Client ID: ZZZZZ		Batch ID: 74404		TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011				SeqNo: 2213975	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2741.333	330	3330	0	82.3	62	109	2379	14.2	20	
1,4-Dichlorobenzene	2463.667	330	3330	0	74.0	57	99	2142	14.0	20	
2,4-Dinitrotoluene	3428.000	330	3330	0	103	76	126	2960	14.7	20	
2-Chlorophenol	2463.667	330	3330	0	74.0	52	120	2159	13.2	20	
4-Chloro-3-methylphenol	3312.000	660	3330	0	99.5	63	137	2902	13.2	20	
4-Nitrophenol	3664.000	1600	3330	0	110	52	144	3211	13.2	20	
Acenaphthene	2876.000	330	3330	0	86.4	61	121	2531	12.8	20	
N-Nitrosodi-n-propylamine	3075.333	330	3330	0	92.4	67	116	2739	11.6	20	
Pentachlorophenol	2775.333	1600	3330	0	83.3	47	143	2399	14.5	20	
Phenol	2650.667	330	3330	0	79.6	54	126	2355	11.8	20	
Pyrene	3094.667	330	3330	0	92.9	68	121	2700	13.6	20	
Surr: 1,2-Dichlorobenzene-d4	2326.667		3330		69.9	45	105		0	0	

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

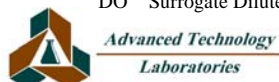
TestCode: 8270_S_FULL

Sample ID: 118977-001AMSD		SampType: MSD		TestCode: 8270_S_FULL Units: µg/Kg		Prep Date: 7/20/2011		RunNo: 135242			
Client ID: ZZZZZZ		Batch ID: 74404		TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011		SeqNo: 2213975			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	2903.667		3330		87.2	41	129		0	0	
Surr: 2-Chlorophenol-d4	2448.333		3330		73.5	55	108		0	0	
Surr: 2-Fluorobiphenyl	2670.333		3330		80.2	56	114		0	0	
Surr: 2-Fluorophenol	2473.667		3330		74.3	50	108		0	0	
Surr: 4-Terphenyl-d14	3011.667		3330		90.4	59	141		0	0	
Surr: Nitrobenzene-d5	2852.667		3330		85.7	45	114		0	0	
Surr: Phenol-d5	2669.333		3330		80.2	46	118		0	0	

Sample ID: MB-74404		SampType: MBLK		TestCode: 8270_S_FULL Units: µg/Kg		Prep Date: 7/20/2011		RunNo: 135242			
Client ID: PBS		Batch ID: 74404		TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011		SeqNo: 2214017			
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									

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Mactec
Work Order: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

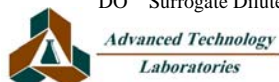
TestCode: 8270_S_FULL

Sample ID: MB-74404	SampType: MBLK	TestCode: 8270_S_FULL	Units: µg/Kg	Prep Date: 7/20/2011	RunNo: 135242
Client ID: PBS	Batch ID: 74404	TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011	SeqNo: 2214017

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
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									

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: 118934
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: MB-74404	SampType: MBLK	TestCode: 8270_S_FULL	Units: µg/Kg	Prep Date: 7/20/2011	RunNo: 135242						
Client ID: PBS	Batch ID: 74404	TestNo: EPA 8270C EPA 3550B		Analysis Date: 7/21/2011	SeqNo: 2214017						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
Naphthalene	ND	330									
Nitrobenzene	ND	330									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	1990.667		3330		59.8	45	105				
Surr: 2,4,6-Tribromophenol	1936.667		3330		58.2	41	129				
Surr: 2-Chlorophenol-d4	2132.000		3330		64.0	55	108				
Surr: 2-Fluorobiphenyl	2112.000		3330		63.4	56	114				
Surr: 2-Fluorophenol	2165.333		3330		65.0	50	108				
Surr: 4-Terphenyl-d14	2400.667		3330		72.1	59	141				
Surr: Nitrobenzene-d5	2352.000		3330		70.6	45	114				
Surr: Phenol-d5	2315.000		3330		69.5	46	118				

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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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: [Signature] Date: 7/14/11
 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. SLAVSON AVE City: LOS ANGELES State: CA Zip Code: 90040 TEL: _____ FAX: _____

Project Name: METRO WESTSIDE EXTENSION Project #: 4953-10-1561 Sampler: DIAN D. SNYDER (Printed Name) _____ (Signature) _____
 Relinquished by: DIAN D. SNYDER Date: 07-13-11 Time: 18:00 Received by: MATT FRAYCHINEAUD Date: 7/14/11 Time: 10:44
 Relinquished by: [Signature] Date: 7/14/11 Time: 12:50 Received by: [Signature] Date: 7/14/11 Time: 12:50

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: Matt Fraychineaud Date: 7/14/11
[Signature] Date: _____
 Special Instructions/Comments: _____

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

ITEM	LAB USE ONLY:		Sample Description	Date	Time
	Batch #:	Lab No.			
	<u>118934-001</u>	<u>E-117-42.5</u>		<u>7/13</u>	<u>13:05</u>
		<u>E-117-50</u>		<u>7/13</u>	<u>13:45</u>
		<u>E-117-55</u>		<u>7/13</u>	<u>14:25</u>
		<u>E-117-20</u>		<u>7/13</u>	<u>11:25</u>
		<u>E-117-30</u>		<u>7/13</u>	<u>11:58</u>

Circle or Add Analysis(es) Requested

Analysis	Requested
808A (Pesticides)	<input checked="" type="checkbox"/>
8260B (PCB)	<input checked="" type="checkbox"/>
8270C (Nitrates)	<input checked="" type="checkbox"/>
6010B (Total Metal)	<input checked="" type="checkbox"/>
8015B (GRO) / 8021 (BTEX)	<input checked="" type="checkbox"/>
8015B (DRO) / 8020	<input checked="" type="checkbox"/>
TITLE 22 / CAM 17 (6010 / 7000)	<input checked="" type="checkbox"/>

Specify Appropriate Matrix

Matrix	Soil	Drinking Water	Ground Water	Wastewater	Stormwater	Aqueous
Sediment	<input checked="" type="checkbox"/>					
Soil	<input checked="" type="checkbox"/>					
Drinking Water		<input checked="" type="checkbox"/>				
Ground Water			<input checked="" type="checkbox"/>			
Wastewater				<input checked="" type="checkbox"/>		
Stormwater					<input checked="" type="checkbox"/>	
Aqueous						<input checked="" type="checkbox"/>

Container(s)

Container #	Type	TAT
<u>7</u>	<u>TV</u>	<u>E</u>
<u>7</u>	<u>TV</u>	<u>E</u>
<u>7</u>	<u>TV</u>	<u>E</u>
<u>1</u>	<u>T</u>	<u>Hold</u>
<u>1</u>	<u>T</u>	<u>Hold</u>

QA/QC

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

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

Routing: Routine 7 Workdays, Urgent 3 Workdays, Critical 2 Workdays, Emergency Next workday

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

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

Figure I-1.640

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.: 118996

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 18, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

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

Sincerely,

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

Eddie F. Rodriguez
Laboratory Director

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



Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 29-Jul-11

CLIENT: Mactec	Client Sample ID: E-118-45
Lab Order: 118996	Collection Date: 7/15/2011 12:15:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10	Matrix: SOIL
Lab ID: 118996-001D	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
LUFT			EPA 8015B(M)			
RunID: GC16_110727C	QC Batch: 74577				PrepDate: 7/27/2011	Analyst: CBR
DRO	ND	10		mg/Kg	1	7/27/2011 08:24 PM
ORO	ND	10		mg/Kg	1	7/27/2011 08:24 PM
Surr: p-Terphenyl	88.5	63-152		%REC	1	7/27/2011 08:24 PM
GASOLINE RANGE ORGANICS BY GC/FID						
			EPA 8015B(M)			
RunID: GC2_110727A	QC Batch: E11VS276				PrepDate:	Analyst: TP
GRO	ND	1.0		mg/Kg	1	7/27/2011 01:39 PM
Surr: Bromofluorobenzene (FID)	109	62-153		%REC	1	7/27/2011 01:39 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: 29-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-118-55
Lab Order:	118996	Collection Date:	7/15/2011 1:00:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	118996-002D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
LUFT			EPA 8015B(M)			
RunID: GC16_110727C	QC Batch: 74577				PrepDate: 7/27/2011	Analyst: CBR
DRO	5200	50		mg/Kg	5	7/28/2011 08:59 AM
ORO	9300	50		mg/Kg	5	7/28/2011 08:59 AM
Surr: p-Terphenyl	68.5	63-152		%REC	5	7/28/2011 08:59 AM
GASOLINE RANGE ORGANICS BY GC/FID						
			EPA 8015B(M)			
RunID: GC2_110727A	QC Batch: E11VS276				PrepDate:	Analyst: TP
GRO	2.5	1.0		mg/Kg	1	7/27/2011 01:55 PM
Surr: Bromofluorobenzene (FID)	79.2	62-153		%REC	1	7/27/2011 01:55 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	



Advanced Technology
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CLIENT: Mactec
Work Order: 118996
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: LCS-74577	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/27/2011	RunNo: 135389						
Client ID: LCSS	Batch ID: 74577	TestNo: EPA 8015B(M LUFT)	Analysis Date: 7/27/2011	SeqNo: 2216550							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	946.040	10	1000	0	94.6	76	139				
Surr: p-Terphenyl	71.610		80.00		89.5	63	152				

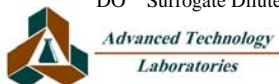
Sample ID: 119142-011AMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/27/2011	RunNo: 135389						
Client ID: ZZZZZZ	Batch ID: 74577	TestNo: EPA 8015B(M LUFT)	Analysis Date: 7/27/2011	SeqNo: 2216557							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	948.460	10	1000	0	94.8	60	158				
Surr: p-Terphenyl	85.730		80.00		107	63	152				

Sample ID: 119142-011AMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/27/2011	RunNo: 135389						
Client ID: ZZZZZZ	Batch ID: 74577	TestNo: EPA 8015B(M LUFT)	Analysis Date: 7/27/2011	SeqNo: 2216558							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	961.690	10	1000	0	96.2	60	158	948.5	1.39	20	
Surr: p-Terphenyl	75.010		80.00		93.8	63	152		0	0	

Sample ID: MB-74577	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 7/27/2011	RunNo: 135389						
Client ID: PBS	Batch ID: 74577	TestNo: EPA 8015B(M LUFT)	Analysis Date: 7/28/2011	SeqNo: 2216568							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	10									
Surr: p-Terphenyl	75.640		80.00		94.6	63	152				

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: 118996
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_GAS

Sample ID: E110727LC1	SampType: LCS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: LCSS	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216570							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.830	1.0	5.000	0	96.6	70	130				
Surr: Bromofluorobenzene (FID)	125.597		100.0		126	62	153				

Sample ID: E110727MB1MS	SampType: MS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: ZZZZZZ	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216571							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.908	1.0	5.000	0	98.2	49	131				
Surr: Bromofluorobenzene (FID)	124.985		100.0		125	62	153				

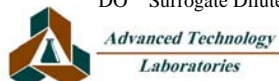
Sample ID: E110727MB1MSD	SampType: MSD	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: ZZZZZZ	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216572							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.758	1.0	5.000	0	95.2	49	131	4.908	3.10	20	
Surr: Bromofluorobenzene (FID)	121.855		100.0		122	62	153		0	0	

Sample ID: E110727MB1	SampType: MBLK	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: PBS	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216573							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	85.409		100.0		85.4	62	153				

Sample ID: 118996-001DMS	SampType: MS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: E-118-45	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216578							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	3.714	1.0	5.000	0	74.3	49	131				

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: 118996
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_GAS

Sample ID: 118996-001DMS	SampType: MS	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: E-118-45	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216578							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

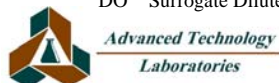
Surr: Bromofluorobenzene (FID)	122.454	100.0	122	62	153
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Sample ID: 118996-001DMSD	SampType: MSD	TestCode: 8015_S_GAS	Units: mg/Kg	Prep Date:	RunNo: 135388						
Client ID: E-118-45	Batch ID: E11VS276	TestNo: EPA 8015B(M)	Analysis Date: 7/27/2011	SeqNo: 2216579							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	4.449	1.0	5.000	0	89.0	49	131	3.714	18.0	20
Surr: Bromofluorobenzene (FID)	122.760	100.0	123	62	153	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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