

August 12, 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.: 119284

RE: METRO WESTSIDE EXTENSION, 4953-10-1


Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on August 05, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,


Eddie F. Rodriguez
Laboratory Director

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



CLIENT: Mactec
Project: METRO WESTSIDE EXTENSION, 4953-10-1
Lab Order: 119284

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

Voa vials for water sample were not labelled, sample ID was taken from ziplock.



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-55
Lab Order: 119284 **Collection Date:** 8/4/2011 12:20:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-001A

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

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1,1-Trichloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1,2,2-Tetrachloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1,2-Trichloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1-Dichloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1-Dichloroethene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,1-Dichloropropene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2,3-Trichlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2,3-Trichloropropane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2,4-Trichlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2,4-Trimethylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2-Dibromo-3-chloropropane	ND	7.3	µg/Kg	1	8/8/2011 11:01 AM		
1,2-Dibromoethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2-Dichlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2-Dichloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,2-Dichloropropane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,3,5-Trimethylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,3-Dichlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,3-Dichloropropane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
1,4-Dichlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
2,2-Dichloropropane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
2-Chlorotoluene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
4-Chlorotoluene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
4-Isopropyltoluene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Benzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Bromobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Bromodichloromethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Bromoform	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Bromomethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Carbon tetrachloride	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Chlorobenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Chloroethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Chloroform	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Chloromethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
cis-1,2-Dichloroethene	ND	3.7	µg/Kg	1	8/8/2011 11:01 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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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

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ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-55
Lab Order: 119284 **Collection Date:** 8/4/2011 12:20:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-001A

Analyses Result PQL Qual Units DF Date Analyzed

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Di-isopropyl ether	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Dibromochloromethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Dibromomethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Dichlorodifluoromethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Ethyl Tert-butyl ether	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Ethylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Hexachlorobutadiene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Isopropylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
m,p-Xylene	ND	7.3	µg/Kg	1	8/8/2011 11:01 AM		
Methylene chloride	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
MTBE	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
n-Butylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
n-Propylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Naphthalene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
o-Xylene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
sec-Butylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Styrene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Tert-amyl methyl ether	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Tert-Butanol	ND	73	µg/Kg	1	8/8/2011 11:01 AM		
tert-Butylbenzene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Tetrachloroethene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Toluene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
trans-1,2-Dichloroethene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Trichloroethene	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Trichlorofluoromethane	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Vinyl chloride	ND	3.7	µg/Kg	1	8/8/2011 11:01 AM		
Surr: 1,2-Dichloroethane-d4	102	65-141	%REC	1	8/8/2011 11:01 AM		
Surr: 4-Bromofluorobenzene	92.9	57-134	%REC	1	8/8/2011 11:01 AM		
Surr: Dibromofluoromethane	94.5	70-128	%REC	1	8/8/2011 11:01 AM		
Surr: Toluene-d8	97.5	72-123	%REC	1	8/8/2011 11:01 AM		

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
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ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-55
Lab Order:	119284	Collection Date:	8/4/2011 12:20:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119284-001D		

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

EPA 8015B(M)

RunID: GC2_110808A	QC Batch: E11VS290	PrepDate: 8/4/2011	Analyst: TP		
GRO	ND	0.72	mg/Kg	1	8/8/2011 02:14 PM
Surr: Bromofluorobenzene (FID)	123	51-161	%REC	1	8/8/2011 02:14 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: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-55
Lab Order: 119284 **Collection Date:** 8/4/2011 12:20:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-001G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS

		EPA 3050B		EPA 6010B		
RunID:	ICP8_110810B	QC Batch:	74814	PrepDate:	8/9/2011	Analyst: IL
Antimony	ND	2.0	mg/Kg	1	8/10/2011 11:03 AM	
Arsenic	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Barium	130	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Beryllium	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Cadmium	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Chromium	21	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Cobalt	6.5	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Copper	8.5	2.0	mg/Kg	1	8/10/2011 11:03 AM	
Lead	2.0	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Molybdenum	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Nickel	16	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Selenium	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Silver	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Thallium	ND	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Vanadium	14	1.0	mg/Kg	1	8/10/2011 11:03 AM	
Zinc	23	1.0	mg/Kg	1	8/10/2011 11:03 AM	

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID LUFT

		EPA 8015B(M)				
RunID:	GC16_110810A	QC Batch:	74806	PrepDate:	8/9/2011	Analyst: CBR
DRO	ND	10	mg/Kg	1	8/10/2011 10:38 AM	
ORO	ND	10	mg/Kg	1	8/10/2011 10:38 AM	
Surr: p-Terphenyl	91.6	63-152	%REC	1	8/10/2011 10:38 AM	

MERCURY BY COLD VAPOR TECHNIQUE

		EPA 7471A				
RunID:	AA1_110810C	QC Batch:	74816	PrepDate:	8/9/2011	Analyst: VV
Mercury	ND	0.10	mg/Kg	1	8/10/2011 12:50 PM	

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ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-60
Lab Order: 119284 **Collection Date:** 8/4/2011 12:55:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-002A

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

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1,1-Trichloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1,2,2-Tetrachloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1,2-Trichloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1-Dichloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1-Dichloroethene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,1-Dichloropropene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2,3-Trichlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2,3-Trichloropropane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2,4-Trichlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2,4-Trimethylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2-Dibromo-3-chloropropane	ND	7.5	µg/Kg	1	8/8/2011 11:19 AM		
1,2-Dibromoethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2-Dichlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2-Dichloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,2-Dichloropropane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,3,5-Trimethylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,3-Dichlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,3-Dichloropropane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
1,4-Dichlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
2,2-Dichloropropane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
2-Chlorotoluene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
4-Chlorotoluene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
4-Isopropyltoluene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Benzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Bromobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Bromodichloromethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Bromoform	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Bromomethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Carbon tetrachloride	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Chlorobenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Chloroethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Chloroform	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Chloromethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
cis-1,2-Dichloroethene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		

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ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-60
Lab Order: 119284 **Collection Date:** 8/4/2011 12:55:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-002A

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

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Di-isopropyl ether	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Dibromochloromethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Dibromomethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Dichlorodifluoromethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Ethyl Tert-butyl ether	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Ethylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Hexachlorobutadiene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Isopropylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
m,p-Xylene	ND	7.5	µg/Kg	1	8/8/2011 11:19 AM		
Methylene chloride	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
MTBE	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
n-Butylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
n-Propylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Naphthalene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
o-Xylene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
sec-Butylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Styrene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Tert-amyl methyl ether	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Tert-Butanol	ND	75	µg/Kg	1	8/8/2011 11:19 AM		
tert-Butylbenzene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Tetrachloroethene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Toluene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
trans-1,2-Dichloroethene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Trichloroethene	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Trichlorofluoromethane	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Vinyl chloride	ND	3.8	µg/Kg	1	8/8/2011 11:19 AM		
Surr: 1,2-Dichloroethane-d4	99.0	65-141	%REC	1	8/8/2011 11:19 AM		
Surr: 4-Bromofluorobenzene	90.2	57-134	%REC	1	8/8/2011 11:19 AM		
Surr: Dibromofluoromethane	93.0	70-128	%REC	1	8/8/2011 11:19 AM		
Surr: Toluene-d8	96.1	72-123	%REC	1	8/8/2011 11:19 AM		

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
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ANALYTICAL RESULTS

Print Date: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-60
Lab Order:	119284	Collection Date:	8/4/2011 12:55:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119284-002D		

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

EPA 8015B(M)

RunID: GC2_110808A	QC Batch: E11VS290	PrepDate: 8/4/2011	Analyst: TP		
GRO	ND	0.77	mg/Kg	1	8/8/2011 02:52 PM
Surr: Bromofluorobenzene (FID)	132	51-161	%REC	1	8/8/2011 02:52 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: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-60
Lab Order:	119284	Collection Date:	8/4/2011 12:55:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119284-002G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110810A	QC Batch: 74806			PrepDate:	8/9/2011	Analyst: CBR
DRO	ND	10		mg/Kg	1	8/10/2011 10:50 AM
ORO	ND	10		mg/Kg	1	8/10/2011 10:50 AM
Surr: p-Terphenyl	90.0	63-152		%REC	1	8/10/2011 10:50 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: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-70
Lab Order: 119284 **Collection Date:** 8/4/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-003A

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

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1-Dichloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1-Dichloroethene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,1-Dichloropropene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2-Dibromo-3-chloropropane	ND	7.2	µg/Kg	1	8/8/2011 11:37 AM		
1,2-Dibromoethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2-Dichloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,2-Dichloropropane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,3-Dichloropropane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
2,2-Dichloropropane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
2-Chlorotoluene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
4-Chlorotoluene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
4-Isopropyltoluene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Benzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Bromobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Bromodichloromethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Bromoform	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Bromomethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Carbon tetrachloride	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Chlorobenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Chloroethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Chloroform	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Chloromethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1	8/8/2011 11:37 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: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-70
Lab Order: 119284 **Collection Date:** 8/4/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119284-003A

Analyses Result PQL Qual Units DF Date Analyzed

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS4_110808A	QC Batch:	K11VS205	PrepDate:	8/4/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Di-isopropyl ether	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Dibromochloromethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Dibromomethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Ethylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Hexachlorobutadiene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Isopropylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
m,p-Xylene	ND	7.2	µg/Kg	1	8/8/2011 11:37 AM		
Methylene chloride	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
MTBE	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
n-Butylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
n-Propylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Naphthalene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
o-Xylene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
sec-Butylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Styrene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Tert-Butanol	ND	72	µg/Kg	1	8/8/2011 11:37 AM		
tert-Butylbenzene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Tetrachloroethene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Toluene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Trichloroethene	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Trichlorofluoromethane	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Vinyl chloride	ND	3.6	µg/Kg	1	8/8/2011 11:37 AM		
Surr: 1,2-Dichloroethane-d4	108	65-141	%REC	1	8/8/2011 11:37 AM		
Surr: 4-Bromofluorobenzene	91.3	57-134	%REC	1	8/8/2011 11:37 AM		
Surr: Dibromofluoromethane	104	70-128	%REC	1	8/8/2011 11:37 AM		
Surr: Toluene-d8	95.4	72-123	%REC	1	8/8/2011 11:37 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: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-70
Lab Order:	119284	Collection Date:	8/4/2011 2:05:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119284-003D		

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

EPA 8015B(M)

RunID: GC2_110808A	QC Batch: E11VS290	PrepDate: 8/4/2011	Analyst: TP		
GRO	ND	0.74	mg/Kg	1	8/8/2011 03:08 PM
Surr: Bromofluorobenzene (FID)	116	51-161	%REC	1	8/8/2011 03:08 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: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-70
Lab Order:	119284	Collection Date:	8/4/2011 2:05:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119284-003G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110810A	QC Batch: 74806			PrepDate: 8/9/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/10/2011 11:00 AM
ORO	ND	10		mg/Kg	1	8/10/2011 11:00 AM
Surr: p-Terphenyl	110	63-152		%REC	1	8/10/2011 11:00 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: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-GW
Lab Order: 119284 **Collection Date:** 8/4/2011 11:05:00 AM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER
Lab ID: 119284-004A

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

EPA 8260B

RunID:	MS11_110811A	QC Batch:	A11VW136	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Benzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Bromobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Bromodichloromethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Bromoform	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Bromomethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Chlorobenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Chloroethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Chloroform	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Chloromethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	8/11/2011 12:56 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: 12-Aug-11

CLIENT: Mactec **Client Sample ID:** E-123-GW
Lab Order: 119284 **Collection Date:** 8/4/2011 11:05:00 AM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER
Lab ID: 119284-004A

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

EPA 8260B

RunID:	MS11_110811A	QC Batch:	A11VW136	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Di-isopropyl ether	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Dibromochloromethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Dibromomethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Ethyl tert-butyl ether	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Ethylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Isopropylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
m,p-Xylene	ND	1.0	µg/L	1	8/11/2011 12:56 PM	
Methylene chloride	ND	1.0	µg/L	1	8/11/2011 12:56 PM	
MTBE	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
n-Butylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
n-Propylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Naphthalene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
o-Xylene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Styrene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Tert-amyl methyl ether	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Tert-Butanol	ND	10	µg/L	1	8/11/2011 12:56 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Tetrachloroethene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Toluene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Trichloroethene	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Vinyl chloride	ND	0.50	µg/L	1	8/11/2011 12:56 PM	
Surr: 1,2-Dichloroethane-d4	103	70-130	%REC	1	8/11/2011 12:56 PM	
Surr: 4-Bromofluorobenzene	95.2	70-130	%REC	1	8/11/2011 12:56 PM	
Surr: Dibromofluoromethane	113	70-130	%REC	1	8/11/2011 12:56 PM	
Surr: Toluene-d8	107	70-130	%REC	1	8/11/2011 12:56 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: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-GW
Lab Order:	119284	Collection Date:	8/4/2011 11:05:00 AM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	GROUNDWATER
Lab ID:	119284-004B		

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

EPA 8015B(M)

RunID: GC19_110808A	QC Batch: M11VW155	PrepDate:	Analyst: BB		
GRO	ND	0.20	mg/L	1	8/8/2011 01:09 PM
Surr: Bromofluorobenzene (FID)	88.9	70-130	%REC	1	8/8/2011 01:09 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: 12-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-123-GW
Lab Order:	119284	Collection Date:	8/4/2011 11:05:00 AM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	GROUNDWATER
Lab ID:	119284-004C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	EPA 3510C			EPA 8015B(M)		
RunID: GC16_110810D	QC Batch: 74826			PrepDate:	8/10/2011	Analyst: CBR
DRO	ND	0.25		mg/L	1	8/10/2011 10:57 PM
ORO	ND	0.25		mg/L	1	8/10/2011 10:57 PM
Surr: p-Terphenyl	76.4	36-126		%REC	1	8/10/2011 10:57 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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: MB-74814	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135712						
Client ID: PBS	Batch ID: 74814	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/10/2011	SeqNo: 2222616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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

Sample ID: LCS-74814	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135712						
Client ID: LCSS	Batch ID: 74814	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/10/2011	SeqNo: 2222617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	50.271	2.0	50.00	0	101	80	120				
Arsenic	49.179	1.0	50.00	0	98.4	80	120				
Barium	51.544	1.0	50.00	0	103	80	120				
Beryllium	50.766	1.0	50.00	0	102	80	120				
Cadmium	50.242	1.0	50.00	0	100	80	120				
Chromium	47.963	1.0	50.00	0	95.9	80	120				
Cobalt	51.548	1.0	50.00	0	103	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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: LCS-74814		SampType: LCS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 8/9/2011		RunNo: 135712		
Client ID: LCSS		Batch ID: 74814		TestNo: EPA 6010B EPA 3050B				Analysis Date: 8/10/2011		SeqNo: 2222617		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	52.061	2.0	50.00	0	104	80	120					
Lead	50.782	1.0	50.00	0	102	80	120					
Molybdenum	53.077	1.0	50.00	0	106	80	120					
Nickel	50.644	1.0	50.00	0	101	80	120					
Selenium	47.021	1.0	50.00	0	94.0	80	120					
Silver	51.394	1.0	50.00	0	103	80	120					
Thallium	48.489	1.0	50.00	0	97.0	80	120					
Vanadium	50.978	1.0	50.00	0	102	80	120					
Zinc	50.981	1.0	50.00	0	102	80	120					

Sample ID: 119278-034A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 8/9/2011		RunNo: 135712		
Client ID: ZZZZZZ		Batch ID: 74814		TestNo: EPA 6010B EPA 3050B				Analysis Date: 8/10/2011		SeqNo: 2222621		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	92.389	2.0	125.0	1.548	72.7	32	105					
Arsenic	166.044	1.0	125.0	53.33	90.2	49	106					
Barium	225.663	1.0	125.0	119.0	85.3	31	133					
Beryllium	104.675	1.0	125.0	0.4215	83.4	56	106					
Cadmium	100.095	1.0	125.0	1.131	79.2	51	103					
Chromium	125.636	1.0	125.0	25.22	80.3	45	114					
Cobalt	114.206	1.0	125.0	7.791	85.1	52	106					
Copper	131.374	2.0	125.0	15.49	92.7	54	125					
Lead	116.528	1.0	125.0	14.30	81.8	34	126					
Molybdenum	106.289	1.0	125.0	0	85.0	54	106					
Nickel	135.859	1.0	125.0	32.81	82.4	45	111					
Selenium	100.711	1.0	125.0	0	80.6	47	104					
Silver	109.520	1.0	125.0	0	87.6	56	112					
Thallium	99.572	1.0	125.0	0	79.7	46	101					
Vanadium	132.377	1.0	125.0	24.77	86.1	54	114					
Zinc	160.699	1.0	125.0	56.44	83.4	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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: 119278-034A-MSD		SampType: MSD		TestCode: 6010_S		Units: mg/Kg		Prep Date: 8/9/2011		RunNo: 135712	
Client ID: ZZZZZZ		Batch ID: 74814		TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/10/2011		SeqNo: 2222622			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	96.404	2.0	125.0	1.548	75.9	32	105	92.39	4.25	20	
Arsenic	150.340	1.0	125.0	53.33	77.6	49	106	166.0	9.93	20	
Barium	193.918	1.0	125.0	119.0	59.9	31	133	225.7	15.1	20	
Beryllium	106.839	1.0	125.0	0.4215	85.1	56	106	104.7	2.05	20	
Cadmium	102.365	1.0	125.0	1.131	81.0	51	103	100.1	2.24	20	
Chromium	124.288	1.0	125.0	25.22	79.3	45	114	125.6	1.08	20	
Cobalt	115.689	1.0	125.0	7.791	86.3	52	106	114.2	1.29	20	
Copper	129.770	2.0	125.0	15.49	91.4	54	125	131.4	1.23	20	
Lead	115.278	1.0	125.0	14.30	80.8	34	126	116.5	1.08	20	
Molybdenum	108.972	1.0	125.0	0	87.2	54	106	106.3	2.49	20	
Nickel	133.463	1.0	125.0	32.81	80.5	45	111	135.9	1.78	20	
Selenium	101.675	1.0	125.0	0	81.3	47	104	100.7	0.953	20	
Silver	112.161	1.0	125.0	0	89.7	56	112	109.5	2.38	20	
Thallium	102.337	1.0	125.0	0	81.9	46	101	99.57	2.74	20	
Vanadium	129.397	1.0	125.0	24.77	83.7	54	114	132.4	2.28	20	
Zinc	152.610	1.0	125.0	56.44	76.9	28	125	160.7	5.16	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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-74816	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135723						
Client ID: PBS	Batch ID: 74816	TestNo: EPA 7471A		Analysis Date: 8/10/2011	SeqNo: 2222793						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: LCS-74816	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135723						
Client ID: LCSS	Batch ID: 74816	TestNo: EPA 7471A		Analysis Date: 8/10/2011	SeqNo: 2222794						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.754 0.10 0.8300 0 90.9 80 120

Sample ID: 119278-031A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135723						
Client ID: ZZZZZZ	Batch ID: 74816	TestNo: EPA 7471A		Analysis Date: 8/10/2011	SeqNo: 2222795						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.675 0.10 0.8300 0.03265 77.4 70 130

Sample ID: 119278-031A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135723						
Client ID: ZZZZZZ	Batch ID: 74816	TestNo: EPA 7471A		Analysis Date: 8/10/2011	SeqNo: 2222796						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.673 0.10 0.8300 0.03265 77.1 70 130 0.6751 0.361 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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: MB-74806	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135722						
Client ID: PBS	Batch ID: 74806	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/10/2011	SeqNo: 2222779						
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	77.440		80.00		96.8	63	152				

Sample ID: LCS-74806	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135722						
Client ID: LCSS	Batch ID: 74806	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/10/2011	SeqNo: 2222780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	959.480	10	1000	0	95.9	76	139				
Surr: p-Terphenyl	99.220		80.00		124	63	152				

Sample ID: 119284-001GMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135722						
Client ID: E-123-55	Batch ID: 74806	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/10/2011	SeqNo: 2222784						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	896.780	10	1000	0	89.7	60	158				
Surr: p-Terphenyl	71.030		80.00		88.8	63	152				

Sample ID: 119284-001GMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/9/2011	RunNo: 135722						
Client ID: E-123-55	Batch ID: 74806	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/10/2011	SeqNo: 2222785						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	962.190	10	1000	0	96.2	60	158	896.8	7.04	20	
Surr: p-Terphenyl	79.480		80.00		99.4	63	152		0	0	

Qualifiers:

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|---|--|--|
| 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: 119284
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: E110808LC1	SampType: LCS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135684						
Client ID: LCSS	Batch ID: E11VS290	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2223329							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.153	1.0	5.000	0	103	70	130				
Surr: Bromofluorobenzene (FID)	128.728		100.0		129	51	161				

Sample ID: E110808MB1MS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135684						
Client ID: ZZZZZ	Batch ID: E11VS290	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2223330							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.274	1.0	5.000	0	105	41	146				
Surr: Bromofluorobenzene (FID)	127.053		100.0		127	51	161				

Sample ID: E110808MB1MSD	SampType: MSD	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135684						
Client ID: ZZZZZ	Batch ID: E11VS290	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2223331							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.008	1.0	5.000	0	100	41	146	5.274	5.17	20	
Surr: Bromofluorobenzene (FID)	120.489		100.0		120	51	161		0	0	

Sample ID: E110808MB1	SampType: MBLK	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135684						
Client ID: PBS	Batch ID: E11VS290	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2223332							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	86.705		100.0		86.7	51	161				

Sample ID: 119278-037AMS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135684						
Client ID: ZZZZZ	Batch ID: E11VS290	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2223337							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.534	1.0	5.000	0	90.7	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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: 119278-037AMS		SampType: MS		TestCode: 8015_S_G 50		Units: mg/Kg		Prep Date:		RunNo: 135684	
Client ID: ZZZZZZ		Batch ID: E11VS290		TestNo: EPA 8015B(M)		Analysis Date: 8/8/2011				SeqNo: 2223337	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	128.781		100.0		129	51	161				

Sample ID: 119278-037AMSD		SampType: MSD		TestCode: 8015_S_G 50		Units: mg/Kg		Prep Date:		RunNo: 135684	
Client ID: ZZZZZZ		Batch ID: E11VS290		TestNo: EPA 8015B(M)		Analysis Date: 8/8/2011				SeqNo: 2223338	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.797	1.0	5.000	0	95.9	41	146	4.534	5.64	20	
Surr: Bromofluorobenzene (FID)	121.041		100.0		121	51	161		0	0	

Qualifiers:

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|---|--|--|
| 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: 119284
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM

Sample ID: MB-74826	SampType: MBLK	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/10/2011	RunNo: 135740						
Client ID: PBW	Batch ID: 74826	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/10/2011	SeqNo: 2223252						
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	0.042		0.08000		52.0	36	126				

Sample ID: LCS-74826	SampType: LCS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/10/2011	RunNo: 135740						
Client ID: LCSW	Batch ID: 74826	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/10/2011	SeqNo: 2223253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.573	0.20	1.000	0	57.3	52	128				
Surr: p-Terphenyl	0.058		0.08000		73.1	36	126				

Sample ID: MB-74826MS	SampType: MS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/10/2011	RunNo: 135740						
Client ID: ZZZZZ	Batch ID: 74826	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/10/2011	SeqNo: 2223254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.627	0.20	1.000	0	62.7	52	128				
Surr: p-Terphenyl	0.062		0.08000		77.4	36	126				

Sample ID: MB-74826MSD	SampType: MSD	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/10/2011	RunNo: 135740						
Client ID: ZZZZZ	Batch ID: 74826	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/11/2011	SeqNo: 2223268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.668	0.20	1.000	0	66.8	52	128	0.6271	6.33	20	
Surr: p-Terphenyl	0.049		0.08000		60.8	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: 119284
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_G PRES

Sample ID: M110808LCS2	SampType: LCS	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135673						
Client ID: LCSW	Batch ID: M11VW155	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2222112							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.000	0.20	1.000	0	100	70	130				
Surr: Bromofluorobenzene (FID)	92.317		100.0		92.3	70	130				

Sample ID: M110808MB1MS	SampType: MS	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135673						
Client ID: ZZZZZ	Batch ID: M11VW155	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2222114							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.063	0.20	1.000	0	106	70	130				
Surr: Bromofluorobenzene (FID)	92.075		100.0		92.1	70	130				

Sample ID: M110808MB1MSD	SampType: MSD	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135673						
Client ID: ZZZZZ	Batch ID: M11VW155	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2222115							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	1.097	0.20	1.000	0	110	70	130	1.063	3.15	20	
Surr: Bromofluorobenzene (FID)	91.396		100.0		91.4	70	130		0	0	

Sample ID: M110808MB1	SampType: MBLK	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135673						
Client ID: PBW	Batch ID: M11VW155	TestNo: EPA 8015B(M)	Analysis Date: 8/8/2011	SeqNo: 2222116							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.20									
Surr: Bromofluorobenzene (FID)	89.326		100.0		89.3	70	130				

Qualifiers:

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

CLIENT: Mactec
Work Order: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110808LCS1		SampType: LCS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135586		
Client ID: LCSS		Batch ID: K11VS205		TestNo: EPA 8260B				Analysis Date: 8/8/2011		SeqNo: 2221937		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	43.150	5.0	50.00	0	86.3	70	130					
Benzene	98.070	5.0	100.0	0	98.1	70	130					
Chlorobenzene	52.040	5.0	50.00	0	104	70	130					
MTBE	49.550	5.0	50.00	0	99.1	70	130					
Toluene	101.200	5.0	100.0	0	101	70	130					
Trichloroethene	49.370	5.0	50.00	0	98.7	70	130					
Surr: 1,2-Dichloroethane-d4	43.940		50.00		87.9	65	141					
Surr: 4-Bromofluorobenzene	55.310		50.00		111	57	134					
Surr: Dibromofluoromethane	43.550		50.00		87.1	70	128					
Surr: Toluene-d8	46.890		50.00		93.8	72	123					

Sample ID: K110808MB1MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135586		
Client ID: ZZZZZ		Batch ID: K11VS205		TestNo: EPA 8260B				Analysis Date: 8/8/2011		SeqNo: 2221938		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	46.270	5.0	50.00	0	92.5	70	130					
Benzene	110.080	5.0	100.0	0	110	70	130					
Chlorobenzene	58.150	5.0	50.00	0	116	70	130					
MTBE	54.490	5.0	50.00	0	109	70	130					
Toluene	113.270	5.0	100.0	0	113	70	130					
Trichloroethene	54.990	5.0	50.00	0	110	70	130					
Surr: 1,2-Dichloroethane-d4	46.290		50.00		92.6	65	141					
Surr: 4-Bromofluorobenzene	57.100		50.00		114	57	134					
Surr: Dibromofluoromethane	46.790		50.00		93.6	70	128					
Surr: Toluene-d8	50.580		50.00		101	72	123					

Sample ID: K110808MB1MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135586		
Client ID: ZZZZZ		Batch ID: K11VS205		TestNo: EPA 8260B				Analysis Date: 8/8/2011		SeqNo: 2221939		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers:

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|---|--|--|
| 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: 119284
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110808MB1MSD	SampType: MSD	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135586						
Client ID: ZZZZZZ	Batch ID: K11VS205	TestNo: EPA 8260B		Analysis Date: 8/8/2011	SeqNo: 2221939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.210	5.0	50.00	0	86.4	70	130	46.27	6.84	20	
Benzene	101.970	5.0	100.0	0	102	70	130	110.1	7.65	20	
Chlorobenzene	54.950	5.0	50.00	0	110	70	130	58.15	5.66	20	
MTBE	50.820	5.0	50.00	0	102	70	130	54.49	6.97	20	
Toluene	104.690	5.0	100.0	0	105	70	130	113.3	7.87	20	
Trichloroethene	50.970	5.0	50.00	0	102	70	130	54.99	7.59	20	
Surr: 1,2-Dichloroethane-d4	43.460		50.00		86.9	65	141		0	0	
Surr: 4-Bromofluorobenzene	45.630		50.00		91.3	57	134		0	0	
Surr: Dibromofluoromethane	44.560		50.00		89.1	70	128		0	0	
Surr: Toluene-d8	47.310		50.00		94.6	72	123		0	0	

Sample ID: K110808MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135586						
Client ID: PBS	Batch ID: K11VS205	TestNo: EPA 8260B		Analysis Date: 8/8/2011	SeqNo: 2221940						
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: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110808MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135586						
Client ID: PBS	Batch ID: K11VS205	TestNo: EPA 8260B		Analysis Date: 8/8/2011	SeqNo: 2221940						
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 | |



CLIENT: Mactec
Work Order: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110808MB1		SampType: MBLK		TestCode: 8260_S_5035 Units: µg/Kg		Prep Date:		RunNo: 135586			
Client ID: PBS		Batch ID: K11VS205		TestNo: EPA 8260B		Analysis Date: 8/8/2011		SeqNo: 2221940			
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	44.980		50.00		90.0	65	141				
Surr: 4-Bromofluorobenzene	44.020		50.00		88.0	57	134				
Surr: Dibromofluoromethane	45.350		50.00		90.7	70	128				
Surr: Toluene-d8	48.320		50.00		96.6	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 | |

CLIENT: Mactec
Work Order: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110811LCS1		SampType: LCS		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135768			
Client ID: LCSW		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011		SeqNo: 2223787			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23.140	0.50	20.00	0	116	70	130				
Benzene	41.580	0.50	40.00	0	104	70	130				
Chlorobenzene	20.510	0.50	20.00	0	103	70	130				
MTBE	21.410	0.50	20.00	0	107	70	130				
Toluene	41.630	0.50	40.00	0	104	70	130				
Trichloroethene	19.920	0.50	20.00	0	99.6	70	130				
Surr: 1,2-Dichloroethane-d4	25.610		25.00		102	70	130				
Surr: 4-Bromofluorobenzene	24.150		25.00		96.6	70	130				
Surr: Dibromofluoromethane	28.050		25.00		112	70	130				
Surr: Toluene-d8	26.780		25.00		107	70	130				

Sample ID: A110811MB3MS		SampType: MS		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135768			
Client ID: ZZZZZ		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011		SeqNo: 2223788			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22.500	0.50	20.00	0	112	70	130				
Benzene	41.370	0.50	40.00	0	103	70	130				
Chlorobenzene	20.280	0.50	20.00	0	101	70	130				
MTBE	20.960	0.50	20.00	0	105	70	130				
Toluene	41.250	0.50	40.00	0	103	70	130				
Trichloroethene	19.770	0.50	20.00	0	98.8	70	130				
Surr: 1,2-Dichloroethane-d4	25.480		25.00		102	70	130				
Surr: 4-Bromofluorobenzene	24.010		25.00		96.0	70	130				
Surr: Dibromofluoromethane	27.810		25.00		111	70	130				
Surr: Toluene-d8	26.630		25.00		107	70	130				

Sample ID: A110811MB3MSD		SampType: MSD		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135768			
Client ID: ZZZZZ		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011		SeqNo: 2223789			
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: 119284
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110811MB3MSD		SampType: MSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135768	
Client ID: ZZZZZ		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011				SeqNo: 2223789	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22.690	0.50	20.00	0	113	70	130	22.50	0.841	20	
Benzene	42.200	0.50	40.00	0	106	70	130	41.37	1.99	20	
Chlorobenzene	20.840	0.50	20.00	0	104	70	130	20.28	2.72	20	
MTBE	22.130	0.50	20.00	0	111	70	130	20.96	5.43	20	
Toluene	42.130	0.50	40.00	0	105	70	130	41.25	2.11	20	
Trichloroethene	20.130	0.50	20.00	0	101	70	130	19.77	1.80	20	
Surr: 1,2-Dichloroethane-d4	25.630		25.00		103	70	130		0	0	
Surr: 4-Bromofluorobenzene	24.340		25.00		97.4	70	130		0	0	
Surr: Dibromofluoromethane	27.700		25.00		111	70	130		0	0	
Surr: Toluene-d8	26.710		25.00		107	70	130		0	0	

Sample ID: A110811MB3		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135768	
Client ID: PBW		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011				SeqNo: 2223790	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

Qualifiers:

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



CLIENT: Mactec
Work Order: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110811MB3		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135768			
Client ID: PBW		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011		SeqNo: 2223790			
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 | |



CLIENT: Mactec
Work Order: 119284
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110811MB3		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135768			
Client ID: PBW		Batch ID: A11VW136		TestNo: EPA 8260B		Analysis Date: 8/11/2011		SeqNo: 2223790			
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	26.000		25.00		104	70	130				
Surr: 4-Bromofluorobenzene	23.620		25.00		94.5	70	130				
Surr: Dibromofluoromethane	28.380		25.00		114	70	130				
Surr: Toluene-d8	26.880		25.00		108	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 | |



July 27, 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.: 119042

RE: Metro Westside Extension, 4951101561

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on July 20, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

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

Eddie F. Rodriguez
Laboratory Director

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



CLIENT: Mactec
Project: Metro Westside Extension, 4951101561
Lab Order: 119042

CASE NARRATIVE

Sample Receiving / General Comments

Headspace >5-6 mm noted on all voa vials for sample E-124-GW.

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



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-55'
Lab Order: 119042	Collection Date: 7/19/2011 12:42:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: SOIL
Lab ID: 119042-002A	

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL
1,1,1,2-Tetrachloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1,1-Trichloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1,2,2-Tetrachloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1,2-Trichloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1-Dichloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1-Dichloroethene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,1-Dichloropropene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2,3-Trichlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2,3-Trichloropropane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2,4-Trichlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2,4-Trimethylbenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2-Dibromo-3-chloropropane	ND	9.8	µg/Kg 1 7/21/2011 04:30 PM
1,2-Dibromoethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2-Dichlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2-Dichloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,2-Dichloropropane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,3,5-Trimethylbenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,3-Dichlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,3-Dichloropropane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
1,4-Dichlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
2,2-Dichloropropane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
2-Chlorotoluene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
4-Chlorotoluene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
4-Isopropyltoluene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Benzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Bromobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Bromodichloromethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Bromoform	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Bromomethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Carbon tetrachloride	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Chlorobenzene	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Chloroethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Chloroform	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
Chloromethane	ND	4.9	µg/Kg 1 7/21/2011 04:30 PM
cis-1,2-Dichloroethene	ND	4.9	µg/Kg 1 7/21/2011 04:30 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
Laboratories

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

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-55'
Lab Order: 119042	Collection Date: 7/19/2011 12:42:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: SOIL
Lab ID: 119042-002A	

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL		
cis-1,3-Dichloropropene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Dibromochloromethane	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Dibromomethane	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Dichlorodifluoromethane	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Ethylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Hexachlorobutadiene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Isopropylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
m,p-Xylene	ND	9.8	µg/Kg	1	7/21/2011 04:30 PM
Methylene chloride	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
n-Butylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
n-Propylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Naphthalene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
o-Xylene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
sec-Butylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Styrene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
tert-Butylbenzene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Tetrachloroethene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Toluene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
trans-1,2-Dichloroethene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Trichloroethene	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Trichlorofluoromethane	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Vinyl chloride	ND	4.9	µg/Kg	1	7/21/2011 04:30 PM
Surr: 1,2-Dichloroethane-d4	114	65-141	%REC	1	7/21/2011 04:30 PM
Surr: 4-Bromofluorobenzene	88.8	57-134	%REC	1	7/21/2011 04:30 PM
Surr: Dibromofluoromethane	107	70-128	%REC	1	7/21/2011 04:30 PM
Surr: Toluene-d8	94.1	72-123	%REC	1	7/21/2011 04:30 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: 27-Jul-11

CLIENT: Mactec
Lab Order: 119042
Project: Metro Westside Extension, 4951101561
Lab ID: 119042-003A

Client Sample ID: E-124-60'
Collection Date: 7/19/2011 12:55:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS

EPA 3050B

EPA 6010B

RunID:	ICP8_110722J	QC Batch:	74487	PrepDate:	7/22/2011	Analyst:	CBB
Antimony	ND	2.0	mg/Kg	1	7/22/2011 08:59 PM		
Arsenic	4.1	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Barium	130	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Beryllium	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Cadmium	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Chromium	43	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Cobalt	16	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Copper	18	2.0	mg/Kg	1	7/22/2011 08:59 PM		
Lead	4.2	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Molybdenum	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Nickel	23	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Selenium	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Silver	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Thallium	ND	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Vanadium	73	1.0	mg/Kg	1	7/22/2011 08:59 PM		
Zinc	60	1.0	mg/Kg	1	7/22/2011 08:59 PM		

MERCURY BY COLD VAPOR TECHNIQUE

EPA 7471A

RunID:	AA5_110721B	QC Batch:	74448	PrepDate:	7/21/2011	Analyst:	VV
Mercury	ND	0.10	mg/Kg	1	7/21/2011 06:04 PM		

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



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ANALYTICAL RESULTS

Print Date: 27-Jul-11

CLIENT:	Mactec	Client Sample ID:	E-124-65'
Lab Order:	119042	Collection Date:	7/19/2011 1:15:00 PM
Project:	Metro Westside Extension, 4951101561	Matrix:	SOIL
Lab ID:	119042-004A		

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL
1,1,1,2-Tetrachloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1,1-Trichloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1,2,2-Tetrachloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1,2-Trichloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1-Dichloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1-Dichloroethene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,1-Dichloropropene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2,3-Trichlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2,3-Trichloropropane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2,4-Trichlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2,4-Trimethylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2-Dibromo-3-chloropropane	ND	11	µg/Kg 1 7/21/2011 04:48 PM
1,2-Dibromoethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2-Dichlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2-Dichloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,2-Dichloropropane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,3,5-Trimethylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,3-Dichlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,3-Dichloropropane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
1,4-Dichlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
2,2-Dichloropropane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
2-Chlorotoluene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
4-Chlorotoluene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
4-Isopropyltoluene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Benzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Bromobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Bromodichloromethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Bromoform	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Bromomethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Carbon tetrachloride	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Chlorobenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Chloroethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Chloroform	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Chloromethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
cis-1,2-Dichloroethene	ND	5.5	µg/Kg 1 7/21/2011 04:48 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: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-65'
Lab Order: 119042	Collection Date: 7/19/2011 1:15:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: SOIL
Lab ID: 119042-004A	

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL
cis-1,3-Dichloropropene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Dibromochloromethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Dibromomethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Dichlorodifluoromethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Ethylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Hexachlorobutadiene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Isopropylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
m,p-Xylene	ND	11	µg/Kg 1 7/21/2011 04:48 PM
Methylene chloride	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
n-Butylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
n-Propylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Naphthalene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
o-Xylene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
sec-Butylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Styrene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
tert-Butylbenzene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Tetrachloroethene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Toluene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
trans-1,2-Dichloroethene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Trichloroethene	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Trichlorofluoromethane	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Vinyl chloride	ND	5.5	µg/Kg 1 7/21/2011 04:48 PM
Surr: 1,2-Dichloroethane-d4	109	65-141	%REC 1 7/21/2011 04:48 PM
Surr: 4-Bromofluorobenzene	88.8	57-134	%REC 1 7/21/2011 04:48 PM
Surr: Dibromofluoromethane	102	70-128	%REC 1 7/21/2011 04:48 PM
Surr: Toluene-d8	94.6	72-123	%REC 1 7/21/2011 04:48 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: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-70'
Lab Order: 119042	Collection Date: 7/19/2011 1:30:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: SOIL
Lab ID: 119042-005A	

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL
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1,1,1,2-Tetrachloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1,1-Trichloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1,2,2-Tetrachloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1,2-Trichloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1-Dichloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1-Dichloroethene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,1-Dichloropropene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2,3-Trichlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2,3-Trichloropropane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2,4-Trichlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2,4-Trimethylbenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2-Dibromo-3-chloropropane	ND	9.6	µg/Kg	1	7/21/2011 05:06 PM
1,2-Dibromoethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2-Dichlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2-Dichloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,2-Dichloropropane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,3,5-Trimethylbenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,3-Dichlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,3-Dichloropropane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
1,4-Dichlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
2,2-Dichloropropane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
2-Chlorotoluene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
4-Chlorotoluene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
4-Isopropyltoluene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Benzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Bromobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Bromodichloromethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Bromoform	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Bromomethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Carbon tetrachloride	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Chlorobenzene	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Chloroethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Chloroform	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
Chloromethane	ND	4.8	µg/Kg	1	7/21/2011 05:06 PM
cis-1,2-Dichloroethene	ND	4.8	µg/Kg	1	7/21/2011 05:06 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: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-70'
Lab Order: 119042	Collection Date: 7/19/2011 1:30:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: SOIL
Lab ID: 119042-005A	

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

EPA 8260B

RunID: MS4_110721A	QC Batch: K11VS194	PrepDate: 7/19/2011	Analyst: DDL
cis-1,3-Dichloropropene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Dibromochloromethane	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Dibromomethane	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Dichlorodifluoromethane	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Ethylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Hexachlorobutadiene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Isopropylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
m,p-Xylene	ND	9.6	µg/Kg 1 7/21/2011 05:06 PM
Methylene chloride	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
n-Butylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
n-Propylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Naphthalene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
o-Xylene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
sec-Butylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Styrene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
tert-Butylbenzene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Tetrachloroethene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Toluene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
trans-1,2-Dichloroethene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Trichloroethene	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Trichlorofluoromethane	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Vinyl chloride	ND	4.8	µg/Kg 1 7/21/2011 05:06 PM
Surr: 1,2-Dichloroethane-d4	110	65-141	%REC 1 7/21/2011 05:06 PM
Surr: 4-Bromofluorobenzene	88.4	57-134	%REC 1 7/21/2011 05:06 PM
Surr: Dibromofluoromethane	104	70-128	%REC 1 7/21/2011 05:06 PM
Surr: Toluene-d8	96.4	72-123	%REC 1 7/21/2011 05:06 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: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-GW
Lab Order: 119042	Collection Date: 7/19/2011 2:05:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: GROUNDWATER
Lab ID: 119042-007A	

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

EPA 8260B

RunID: MS11_110722A	QC Batch: A11VW124	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,1,1-Trichloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,1,2-Trichloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,1-Dichloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,1-Dichloroethene	0.89	0.50	µg/L 1 7/22/2011 01:32 PM
1,1-Dichloropropene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2,3-Trichloropropane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2-Dibromoethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2-Dichlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2-Dichloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,2-Dichloropropane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,3-Dichlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,3-Dichloropropane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
1,4-Dichlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
2,2-Dichloropropane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
2-Chlorotoluene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
4-Chlorotoluene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
4-Isopropyltoluene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Benzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Bromobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Bromodichloromethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Bromoform	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Bromomethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Carbon tetrachloride	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Chlorobenzene	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Chloroethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Chloroform	ND	0.50	µg/L 1 7/22/2011 01:32 PM
Chloromethane	ND	0.50	µg/L 1 7/22/2011 01:32 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L 1 7/22/2011 01:32 PM

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



Advanced Technology
Laboratories

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

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-GW
Lab Order: 119042	Collection Date: 7/19/2011 2:05:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: GROUNDWATER
Lab ID: 119042-007A	

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

EPA 8260B

RunID: MS11_110722A	QC Batch: A11VW124	PrepDate:	Analyst: BD		
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Dibromochloromethane	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Dibromomethane	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Ethylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Isopropylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
m,p-Xylene	ND	1.0	µg/L	1	7/22/2011 01:32 PM
Methylene chloride	ND	1.0	µg/L	1	7/22/2011 01:32 PM
n-Butylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
n-Propylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Naphthalene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
o-Xylene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
sec-Butylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Styrene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
tert-Butylbenzene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Tetrachloroethene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Toluene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Trichloroethene	1.0	0.50	µg/L	1	7/22/2011 01:32 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Vinyl chloride	ND	0.50	µg/L	1	7/22/2011 01:32 PM
Surr: 1,2-Dichloroethane-d4	90.4	70-130	%REC	1	7/22/2011 01:32 PM
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	7/22/2011 01:32 PM
Surr: Dibromofluoromethane	100	70-130	%REC	1	7/22/2011 01:32 PM
Surr: Toluene-d8	101	70-130	%REC	1	7/22/2011 01:32 PM

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



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

Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-GW
Lab Order: 119042	Collection Date: 7/19/2011 2:05:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: GROUNDWATER
Lab ID: 119042-007B	

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

EPA 8015B(M)

RunID: GC19_110721A	QC Batch: M11VW142	PrepDate:	Analyst: DDL		
GRO	ND	0.20	mg/L	1	7/21/2011 02:49 PM
Surr: Bromofluorobenzene (FID)	90.8	70-130	%REC	1	7/21/2011 02:49 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: 27-Jul-11

CLIENT: Mactec	Client Sample ID: E-124-GW
Lab Order: 119042	Collection Date: 7/19/2011 2:05:00 PM
Project: Metro Westside Extension, 4951101561	Matrix: GROUNDWATER
Lab ID: 119042-007C	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	EPA 3510C		EPA 8015B(M)			
RunID: GC16_110726B	QC Batch: 74531				PrepDate: 7/26/2011	Analyst: CBR
DRO	0.36	0.29		mg/L	1	7/26/2011 12:47 PM
ORO	ND	0.29		mg/L	1	7/26/2011 12:47 PM
Surr: p-Terphenyl	67.3	36-126		%REC	1	7/26/2011 12:47 PM

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



*Advanced Technology
 Laboratories*

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

CLIENT: Mactec
Work Order: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

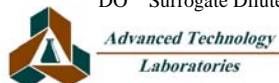
TestCode: 6010_S

Sample ID: MB-74487	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 7/22/2011	RunNo: 135281						
Client ID: PBS	Batch ID: 74487	TestNo: EPA 6010B EPA 3050B		Analysis Date: 7/22/2011	SeqNo: 2214700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: LCS-74487	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 7/22/2011	RunNo: 135281						
Client ID: LCSS	Batch ID: 74487	TestNo: EPA 6010B EPA 3050B		Analysis Date: 7/22/2011	SeqNo: 2214701						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.758	2.0	50.00	0	93.5	80	120				
Arsenic	44.962	1.0	50.00	0	89.9	80	120				
Barium	48.827	1.0	50.00	0	97.7	80	120				
Beryllium	47.862	1.0	50.00	0	95.7	80	120				
Cadmium	44.984	1.0	50.00	0	90.0	80	120				
Chromium	44.091	1.0	50.00	0	88.2	80	120				
Cobalt	47.172	1.0	50.00	0	94.3	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

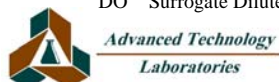
TestCode: 6010_S

Sample ID: LCS-74487		SampType: LCS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 7/22/2011		RunNo: 135281		
Client ID: LCSS		Batch ID: 74487		TestNo: EPA 6010B EPA 3050B				Analysis Date: 7/22/2011		SeqNo: 2214701		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper	49.154	2.0	50.00	0	98.3	80	120					
Lead	45.422	1.0	50.00	0	90.8	80	120					
Molybdenum	48.596	1.0	50.00	0	97.2	80	120					
Nickel	45.592	1.0	50.00	0	91.2	80	120					
Selenium	42.795	1.0	50.00	0	85.6	80	120					
Silver	49.157	1.0	50.00	0	98.3	80	120					
Thallium	45.259	1.0	50.00	0	90.5	80	120					
Vanadium	46.726	1.0	50.00	0	93.5	80	120					
Zinc	45.678	1.0	50.00	0	91.4	80	120					

Sample ID: 119042-003A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 7/22/2011		RunNo: 135281		
Client ID: E-124-60'		Batch ID: 74487		TestNo: EPA 6010B EPA 3050B				Analysis Date: 7/22/2011		SeqNo: 2214711		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	83.260	2.0	125.0	0.8865	65.9	32	105					
Arsenic	98.044	1.0	125.0	4.075	75.2	49	106					
Barium	220.494	1.0	125.0	126.2	75.4	31	133					
Beryllium	97.653	1.0	125.0	0	78.1	56	106					
Cadmium	90.441	1.0	125.0	0.8168	71.7	51	103					
Chromium	131.512	1.0	125.0	43.47	70.4	45	114					
Cobalt	112.520	1.0	125.0	16.29	77.0	52	106					
Copper	131.096	2.0	125.0	18.17	90.3	54	125					
Lead	94.118	1.0	125.0	4.182	71.9	34	126					
Molybdenum	94.629	1.0	125.0	0	75.7	54	106					
Nickel	115.383	1.0	125.0	23.45	73.6	45	111					
Selenium	88.166	1.0	125.0	0	70.5	47	104					
Silver	106.177	1.0	125.0	0	84.9	56	112					
Thallium	79.456	1.0	125.0	0	63.6	46	101					
Vanadium	165.147	1.0	125.0	73.32	73.5	54	114					
Zinc	146.694	1.0	125.0	59.97	69.4	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: 119042
Project: Metro Westside Extension, 4951101561

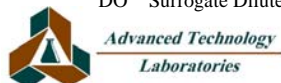
ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: 119042-003A-MSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 7/22/2011	RunNo: 135281						
Client ID: E-124-60'	Batch ID: 74487	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 7/22/2011	SeqNo: 2214712						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	84.038	2.0	125.0	0.8865	66.5	32	105	83.26	0.931	20	
Arsenic	98.425	1.0	125.0	4.075	75.5	49	106	98.04	0.388	20	
Barium	225.586	1.0	125.0	126.2	79.5	31	133	220.5	2.28	20	
Beryllium	99.773	1.0	125.0	0	79.8	56	106	97.65	2.15	20	
Cadmium	91.353	1.0	125.0	0.8168	72.4	51	103	90.44	1.00	20	
Chromium	133.464	1.0	125.0	43.47	72.0	45	114	131.5	1.47	20	
Cobalt	113.317	1.0	125.0	16.29	77.6	52	106	112.5	0.705	20	
Copper	132.463	2.0	125.0	18.17	91.4	54	125	131.1	1.04	20	
Lead	94.664	1.0	125.0	4.182	72.4	34	126	94.12	0.579	20	
Molybdenum	95.098	1.0	125.0	0	76.1	54	106	94.63	0.494	20	
Nickel	116.718	1.0	125.0	23.45	74.6	45	111	115.4	1.15	20	
Selenium	87.424	1.0	125.0	0	69.9	47	104	88.17	0.845	20	
Silver	107.940	1.0	125.0	0	86.4	56	112	106.2	1.65	20	
Thallium	79.968	1.0	125.0	0	64.0	46	101	79.46	0.642	20	
Vanadium	170.174	1.0	125.0	73.32	77.5	54	114	165.1	3.00	20	
Zinc	152.091	1.0	125.0	59.97	73.7	28	125	146.7	3.61	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-74448	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/21/2011	RunNo: 135232						
Client ID: PBS	Batch ID: 74448	TestNo: EPA 7471A		Analysis Date: 7/21/2011	SeqNo: 2213722						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: LCS-74448	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/21/2011	RunNo: 135232						
Client ID: LCSS	Batch ID: 74448	TestNo: EPA 7471A		Analysis Date: 7/21/2011	SeqNo: 2213723						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.893 0.10 0.8300 0 108 80 120

Sample ID: 119005-001A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/21/2011	RunNo: 135232						
Client ID: ZZZZZ	Batch ID: 74448	TestNo: EPA 7471A		Analysis Date: 7/21/2011	SeqNo: 2213724						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

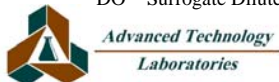
Mercury 1.001 0.10 0.8300 0.09211 109 70 130

Sample ID: 119005-001A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 7/21/2011	RunNo: 135232						
Client ID: ZZZZZ	Batch ID: 74448	TestNo: EPA 7471A		Analysis Date: 7/21/2011	SeqNo: 2213725						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.996 0.10 0.8300 0.09211 109 70 130 1.001 0.421 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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM

Sample ID: MB-74531	SampType: MBLK	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 7/26/2011	RunNo: 135340						
Client ID: PBW	Batch ID: 74531	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 7/26/2011	SeqNo: 2215981						
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	0.043		0.08000		53.9	36	126				

Sample ID: LCS-74531	SampType: LCS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 7/26/2011	RunNo: 135340						
Client ID: LCSW	Batch ID: 74531	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 7/26/2011	SeqNo: 2215982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.532	0.20	1.000	0	53.2	52	128				
Surr: p-Terphenyl	0.050		0.08000		62.6	36	126				

Sample ID: MB-74531MS	SampType: MS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 7/26/2011	RunNo: 135340						
Client ID: ZZZZZ	Batch ID: 74531	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 7/26/2011	SeqNo: 2215983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

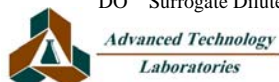
DRO	0.593	0.20	1.000	0	59.3	52	128				
Surr: p-Terphenyl	0.052		0.08000		65.6	36	126				

Sample ID: MB-74531MSD	SampType: MSD	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 7/26/2011	RunNo: 135340						
Client ID: ZZZZZ	Batch ID: 74531	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 7/26/2011	SeqNo: 2215999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.629	0.20	1.000	0	62.9	52	128	0.5926	5.89	20	
Surr: p-Terphenyl	0.045		0.08000		56.0	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_G PRES

Sample ID: M110721LCS2		SampType: LCS		TestCode: 8015_W_G P		Units: mg/L		Prep Date:		RunNo: 135229		
Client ID: LCSW		Batch ID: M11VW142		TestNo: EPA 8015B(M)		Analysis Date: 7/21/2011		SeqNo: 2213681				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	1.089	0.20	1.000	0	109	70	130					
Surr: Bromofluorobenzene (FID)	90.531		100.0		90.5	70	130					

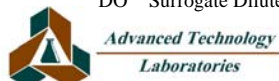
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Client ID: ZZZZZ		Batch ID: M11VW142		TestNo: EPA 8015B(M)		Analysis Date: 7/21/2011		SeqNo: 2213682				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	1.115	0.20	1.000	0	112	70	130					
Surr: Bromofluorobenzene (FID)	89.651		100.0		89.7	70	130					

Sample ID: M110721MB1MSD		SampType: MSD		TestCode: 8015_W_G P		Units: mg/L		Prep Date:		RunNo: 135229		
Client ID: ZZZZZ		Batch ID: M11VW142		TestNo: EPA 8015B(M)		Analysis Date: 7/21/2011		SeqNo: 2213683				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	1.123	0.20	1.000	0	112	70	130	1.115	0.715	20		
Surr: Bromofluorobenzene (FID)	91.368		100.0		91.4	70	130		0	0		

Sample ID: M110721MB1		SampType: MBLK		TestCode: 8015_W_G P		Units: mg/L		Prep Date:		RunNo: 135229		
Client ID: PBW		Batch ID: M11VW142		TestNo: EPA 8015B(M)		Analysis Date: 7/21/2011		SeqNo: 2213684				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
GRO	ND	0.20										
Surr: Bromofluorobenzene (FID)	87.509		100.0		87.5	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

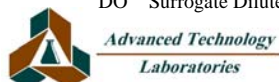
Sample ID: K110721LCS1		SampType: LCS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135240	
Client ID: LCSS		Batch ID: K11VS194		TestNo: EPA 8260B		Analysis Date: 7/21/2011				SeqNo: 2214303	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.840	5.0	50.00	0	97.7	70	130				
Benzene	104.910	5.0	100.0	0	105	70	130				
Chlorobenzene	55.460	5.0	50.00	0	111	70	130				
MTBE	58.230	5.0	50.00	0	116	70	130				
Toluene	104.470	5.0	100.0	0	104	70	130				
Trichloroethene	54.430	5.0	50.00	0	109	70	130				
Surr: 1,2-Dichloroethane-d4	52.870		50.00		106	65	141				
Surr: 4-Bromofluorobenzene	47.780		50.00		95.6	57	134				
Surr: Dibromofluoromethane	52.300		50.00		105	70	128				
Surr: Toluene-d8	51.210		50.00		102	72	123				

Sample ID: K110721MB1MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135240	
Client ID: ZZZZZ		Batch ID: K11VS194		TestNo: EPA 8260B		Analysis Date: 7/21/2011				SeqNo: 2214304	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	50.660	5.0	50.00	0	101	70	130				
Benzene	104.960	5.0	100.0	0	105	70	130				
Chlorobenzene	55.490	5.0	50.00	0	111	70	130				
Toluene	105.390	5.0	100.0	0	105	70	130				
Trichloroethene	53.610	5.0	50.00	0	107	70	130				
Surr: 1,2-Dichloroethane-d4	52.340		50.00		105	65	141				
Surr: 4-Bromofluorobenzene	47.460		50.00		94.9	57	134				
Surr: Dibromofluoromethane	53.190		50.00		106	70	128				
Surr: Toluene-d8	51.000		50.00		102	72	123				

Sample ID: K110721MB1MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135240	
Client ID: ZZZZZ		Batch ID: K11VS194		TestNo: EPA 8260B		Analysis Date: 7/21/2011				SeqNo: 2214305	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	46.820	5.0	50.00	0	93.6	70	130	50.66	7.88	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

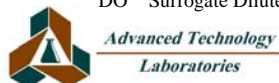
TestCode: 8260_S_5035

Sample ID: K110721MB1MSD	SampType: MSD	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135240						
Client ID: ZZZZZZ	Batch ID: K11VS194	TestNo: EPA 8260B	Analysis Date: 7/21/2011	SeqNo: 2214305							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	97.070	5.0	100.0	0	97.1	70	130	105.0	7.81	20	
Chlorobenzene	51.410	5.0	50.00	0	103	70	130	55.49	7.63	20	
Toluene	97.270	5.0	100.0	0	97.3	70	130	105.4	8.01	20	
Trichloroethene	50.090	5.0	50.00	0	100	70	130	53.61	6.79	20	
Surr: 1,2-Dichloroethane-d4	49.240		50.00		98.5	65	141		0	0	
Surr: 4-Bromofluorobenzene	45.060		50.00		90.1	57	134		0	0	
Surr: Dibromofluoromethane	48.920		50.00		97.8	70	128		0	0	
Surr: Toluene-d8	48.020		50.00		96.0	72	123		0	0	

Sample ID: K110721MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135240						
Client ID: PBS	Batch ID: K11VS194	TestNo: EPA 8260B	Analysis Date: 7/21/2011	SeqNo: 2214320							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									

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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: K110721MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135240						
Client ID: PBS	Batch ID: K11VS194	TestNo: EPA 8260B		Analysis Date: 7/21/2011	SeqNo: 2214320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methylene chloride	ND	5.0									
n-Butylbenzene	ND	5.0									
n-Propylbenzene	ND	5.0									
Naphthalene	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 |
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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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

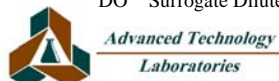
TestCode: 8260_S_5035

Sample ID: K110721MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135240
Client ID: PBS	Batch ID: K11VS194	TestNo: EPA 8260B		Analysis Date: 7/21/2011	SeqNo: 2214320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	5.0									
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									
Surr: 1,2-Dichloroethane-d4	53.070		50.00		106	65	141				
Surr: 4-Bromofluorobenzene	46.320		50.00		92.6	57	134				
Surr: Dibromofluoromethane	52.110		50.00		104	70	128				
Surr: Toluene-d8	50.150		50.00		100	72	123				

Qualifiers:

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



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

CLIENT: Mactec
Work Order: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

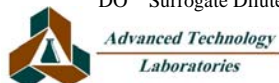
Sample ID: A110722LCS1		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135290		
Client ID: LCSW		Batch ID: A11VW124		TestNo: EPA 8260B		Analysis Date: 7/22/2011		SeqNo: 2214810				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	19.150	0.50	20.00	0	95.8	70	130					
Benzene	40.180	0.50	40.00	0	100	70	130					
Chlorobenzene	20.570	0.50	20.00	0	103	70	130					
MTBE	21.770	0.50	20.00	0	109	70	130					
Toluene	40.690	0.50	40.00	0	102	70	130					
Trichloroethene	19.180	0.50	20.00	0	95.9	70	130					
Surr: 1,2-Dichloroethane-d4	22.710		25.00		90.8	70	130					
Surr: 4-Bromofluorobenzene	25.450		25.00		102	70	130					
Surr: Dibromofluoromethane	24.950		25.00		99.8	70	130					
Surr: Toluene-d8	25.200		25.00		101	70	130					

Sample ID: A110722MB3MS		SampType: MS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135290		
Client ID: ZZZZZ		Batch ID: A11VW124		TestNo: EPA 8260B		Analysis Date: 7/22/2011		SeqNo: 2214811				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.590	0.50	20.00	0	103	70	130					
Benzene	41.310	0.50	40.00	0	103	70	130					
Chlorobenzene	20.970	0.50	20.00	0	105	70	130					
Toluene	42.150	0.50	40.00	0	105	70	130					
Trichloroethene	20.170	0.50	20.00	0	101	70	130					
Surr: 1,2-Dichloroethane-d4	22.670		25.00		90.7	70	130					
Surr: 4-Bromofluorobenzene	25.300		25.00		101	70	130					
Surr: Dibromofluoromethane	24.830		25.00		99.3	70	130					
Surr: Toluene-d8	25.030		25.00		100	70	130					

Sample ID: A110722MB3MSD		SampType: MSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135290		
Client ID: ZZZZZ		Batch ID: A11VW124		TestNo: EPA 8260B		Analysis Date: 7/22/2011		SeqNo: 2214812				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	19.260	0.50	20.00	0	96.3	70	130	20.59	6.68	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: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

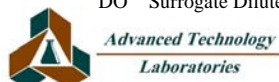
TestCode: 8260_WP_LL

Sample ID: A110722MB3MSD	SampType: MSD	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 135290						
Client ID: ZZZZZZ	Batch ID: A11VW124	TestNo: EPA 8260B	Analysis Date: 7/22/2011	SeqNo: 2214812							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.580	0.50	40.00	0	101	70	130	41.31	1.78	20	
Chlorobenzene	20.770	0.50	20.00	0	104	70	130	20.97	0.958	20	
Toluene	41.150	0.50	40.00	0	103	70	130	42.15	2.40	20	
Trichloroethene	19.750	0.50	20.00	0	98.8	70	130	20.17	2.10	20	
Surr: 1,2-Dichloroethane-d4	22.100		25.00		88.4	70	130		0	0	
Surr: 4-Bromofluorobenzene	25.390		25.00		102	70	130		0	0	
Surr: Dibromofluoromethane	24.860		25.00		99.4	70	130		0	0	
Surr: Toluene-d8	24.900		25.00		99.6	70	130		0	0	

Sample ID: A110722MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 135290						
Client ID: PBW	Batch ID: A11VW124	TestNo: EPA 8260B	Analysis Date: 7/22/2011	SeqNo: 2214813							
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									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									

Qualifiers:

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



CLIENT: Mactec
Work Order: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110722MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 135290						
Client ID: PBW	Batch ID: A11VW124	TestNo: EPA 8260B		Analysis Date: 7/22/2011	SeqNo: 2214813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	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 |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Laboratories*

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

CLIENT: Mactec
Work Order: 119042
Project: Metro Westside Extension, 4951101561

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A110722MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 135290						
Client ID: PBW	Batch ID: A11VW124	TestNo: EPA 8260B	Analysis Date: 7/22/2011	SeqNo: 2214813							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
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	22.020		25.00		88.1	70	130				
Surr: 4-Bromofluorobenzene	24.420		25.00		97.7	70	130				
Surr: Dibromofluoromethane	24.990		25.00		100	70	130				
Surr: Toluene-d8	25.030		25.00		100	70	130				

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 | |



*Advanced Technology
Laboratories*

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

August 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.: 119318

RE: METRO WESTSIDE EXTENSION, 4953-10-1

Attention: Matt Fraychineaud

Enclosed are the results for sample(s) received on August 09, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Eddie F. Rodriguez
Laboratory Director

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



CLIENT: Mactec
Project: METRO WESTSIDE EXTENSION, 4953-10-1
Lab Order: 119318

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 7471A

Samples 119310-001A-MS and 119310-001A-MSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-60
Lab Order: 119318 **Collection Date:** 8/5/2011 12:40:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-001A

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

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1,1-Trichloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1,2,2-Tetrachloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1,2-Trichloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1-Dichloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1-Dichloroethene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,1-Dichloropropene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2,3-Trichlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2,3-Trichloropropane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2,4-Trichlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2,4-Trimethylbenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2-Dibromo-3-chloropropane	ND	7.4	µg/Kg	1	8/12/2011 03:18 PM		
1,2-Dibromoethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2-Dichlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2-Dichloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,2-Dichloropropane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,3,5-Trimethylbenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,3-Dichlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,3-Dichloropropane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
1,4-Dichlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
2,2-Dichloropropane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
2-Chlorotoluene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
4-Chlorotoluene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
4-Isopropyltoluene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Benzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Bromobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Bromodichloromethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Bromoform	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Bromomethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Carbon tetrachloride	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Chlorobenzene	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Chloroethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Chloroform	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
Chloromethane	ND	3.7	µg/Kg	1	8/12/2011 03:18 PM		
cis-1,2-Dichloroethene	ND	3.7	µg/Kg	1	8/12/2011 03:18 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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ANALYTICAL RESULTS

Print Date: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-60
Lab Order: 119318 **Collection Date:** 8/5/2011 12:40:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-001A

Analyses Result PQL Qual Units DF Date Analyzed

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Di-isopropyl ether	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Dibromochloromethane	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Dibromomethane	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Dichlorodifluoromethane	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Ethyl Tert-butyl ether	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Ethylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Hexachlorobutadiene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Isopropylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
m,p-Xylene	ND	7.4	µg/Kg	1		8/12/2011 03:18 PM	
Methylene chloride	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
MTBE	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
n-Butylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
n-Propylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Naphthalene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
o-Xylene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
sec-Butylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Styrene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Tert-amyl methyl ether	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Tert-Butanol	ND	74	µg/Kg	1		8/12/2011 03:18 PM	
tert-Butylbenzene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Tetrachloroethene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Toluene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
trans-1,2-Dichloroethene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Trichloroethene	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Trichlorofluoromethane	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Vinyl chloride	ND	3.7	µg/Kg	1		8/12/2011 03:18 PM	
Surr: 1,2-Dichloroethane-d4	94.4	65-141	%REC	1		8/12/2011 03:18 PM	
Surr: 4-Bromofluorobenzene	92.0	57-134	%REC	1		8/12/2011 03:18 PM	
Surr: Dibromofluoromethane	95.9	70-128	%REC	1		8/12/2011 03:18 PM	
Surr: Toluene-d8	94.5	72-123	%REC	1		8/12/2011 03:18 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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ANALYTICAL RESULTS

Print Date: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-60
Lab Order: 119318 **Collection Date:** 8/5/2011 12:40:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-001D

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

EPA 8015B(M)

RunID: GC2_110812A	QC Batch: E11VS297	PrepDate: 8/5/2011	Analyst: TP		
GRO	ND	0.75	mg/Kg	1	8/12/2011 02:08 PM
Surr: Bromofluorobenzene (FID)	103	51-161	%REC	1	8/12/2011 02:08 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: 18-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-125-60
Lab Order:	119318	Collection Date:	8/5/2011 12:40:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119318-001G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110811A	QC Batch: 74856			PrepDate: 8/11/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/11/2011 12:09 PM
ORO	ND	10		mg/Kg	1	8/11/2011 12:09 PM
Surr: p-Terphenyl	93.4	63-152		%REC	1	8/11/2011 12:09 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-70
Lab Order: 119318 **Collection Date:** 8/5/2011 1:35:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-002A

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

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1-Dichloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1-Dichloroethene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,1-Dichloropropene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2-Dibromo-3-chloropropane	ND	7.1	µg/Kg	1			8/12/2011 03:36 PM
1,2-Dibromoethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2-Dichloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,2-Dichloropropane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,3-Dichloropropane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
2,2-Dichloropropane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
2-Chlorotoluene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
4-Chlorotoluene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
4-Isopropyltoluene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Benzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Bromobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Bromodichloromethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Bromoform	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Bromomethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Carbon tetrachloride	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Chlorobenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Chloroethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Chloroform	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Chloromethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1			8/12/2011 03:36 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-70
Lab Order: 119318 **Collection Date:** 8/5/2011 1:35:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-002A

Analyses Result PQL Qual Units DF Date Analyzed

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Di-isopropyl ether	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Dibromochloromethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Dibromomethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Dichlorodifluoromethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Ethylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Hexachlorobutadiene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Isopropylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
m,p-Xylene	ND	7.1	µg/Kg	1			8/12/2011 03:36 PM
Methylene chloride	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
MTBE	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
n-Butylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
n-Propylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Naphthalene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
o-Xylene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
sec-Butylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Styrene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Tert-amyl methyl ether	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Tert-Butanol	ND	71	µg/Kg	1			8/12/2011 03:36 PM
tert-Butylbenzene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Tetrachloroethene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Toluene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Trichloroethene	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Trichlorofluoromethane	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Vinyl chloride	ND	3.6	µg/Kg	1			8/12/2011 03:36 PM
Surr: 1,2-Dichloroethane-d4	96.6	65-141	%REC	1			8/12/2011 03:36 PM
Surr: 4-Bromofluorobenzene	94.1	57-134	%REC	1			8/12/2011 03:36 PM
Surr: Dibromofluoromethane	96.2	70-128	%REC	1			8/12/2011 03:36 PM
Surr: Toluene-d8	104	72-123	%REC	1			8/12/2011 03:36 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: 18-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-125-70
Lab Order:	119318	Collection Date:	8/5/2011 1:35:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119318-002D		

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

EPA 8015B(M)

RunID: GC2_110812A	QC Batch: E11VS297	PrepDate: 8/5/2011	Analyst: TP		
GRO	ND	0.72	mg/Kg	1	8/12/2011 02:24 PM
Surr: Bromofluorobenzene (FID)	115	51-161	%REC	1	8/12/2011 02:24 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: 18-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-125-70
Lab Order:	119318	Collection Date:	8/5/2011 1:35:00 PM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	SOIL
Lab ID:	119318-002G		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110811A	QC Batch: 74856			PrepDate: 8/11/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/11/2011 12:19 PM
ORO	ND	10		mg/Kg	1	8/11/2011 12:19 PM
Surr: p-Terphenyl	83.6	63-152		%REC	1	8/11/2011 12:19 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-75
Lab Order: 119318 **Collection Date:** 8/5/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-003A

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

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
1,1,1,2-Tetrachloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1,1-Trichloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1,2,2-Tetrachloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1,2-Trichloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1-Dichloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1-Dichloroethene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,1-Dichloropropene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2,3-Trichlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2,3-Trichloropropane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2,4-Trichlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2,4-Trimethylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2-Dibromo-3-chloropropane	ND	7.3	µg/Kg	1	8/12/2011 03:55 PM		
1,2-Dibromoethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2-Dichlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2-Dichloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,2-Dichloropropane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,3,5-Trimethylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,3-Dichlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,3-Dichloropropane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
1,4-Dichlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
2,2-Dichloropropane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
2-Chlorotoluene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
4-Chlorotoluene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
4-Isopropyltoluene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Benzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Bromobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Bromodichloromethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Bromoform	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Bromomethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Carbon tetrachloride	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Chlorobenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Chloroethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Chloroform	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Chloromethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
cis-1,2-Dichloroethene	ND	3.6	µg/Kg	1	8/12/2011 03:55 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
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DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-75
Lab Order: 119318 **Collection Date:** 8/5/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-003A

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

EPA 8260B

RunID:	MS5_110812A	QC Batch:	T11VS145	PrepDate:	8/5/2011	Analyst:	DDL
cis-1,3-Dichloropropene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Di-isopropyl ether	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Dibromochloromethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Dibromomethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Dichlorodifluoromethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Ethyl Tert-butyl ether	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Ethylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Hexachlorobutadiene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Isopropylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
m,p-Xylene	ND	7.3	µg/Kg	1	8/12/2011 03:55 PM		
Methylene chloride	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
MTBE	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
n-Butylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
n-Propylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Naphthalene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
o-Xylene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
sec-Butylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Styrene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Tert-amyl methyl ether	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Tert-Butanol	ND	73	µg/Kg	1	8/12/2011 03:55 PM		
tert-Butylbenzene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Tetrachloroethene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Toluene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
trans-1,2-Dichloroethene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Trichloroethene	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Trichlorofluoromethane	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Vinyl chloride	ND	3.6	µg/Kg	1	8/12/2011 03:55 PM		
Surr: 1,2-Dichloroethane-d4	97.8	65-141	%REC	1	8/12/2011 03:55 PM		
Surr: 4-Bromofluorobenzene	89.5	57-134	%REC	1	8/12/2011 03:55 PM		
Surr: Dibromofluoromethane	96.5	70-128	%REC	1	8/12/2011 03:55 PM		
Surr: Toluene-d8	95.7	72-123	%REC	1	8/12/2011 03:55 PM		

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 RESULTS

Print Date: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-75
Lab Order: 119318 **Collection Date:** 8/5/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-003D

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_110812A	QC Batch: E11VS297			PrepDate: 8/5/2011		Analyst: TP
GRO	ND	0.73		mg/Kg	1	8/12/2011 02:40 PM
Surr: Bromofluorobenzene (FID)	113	51-161		%REC	1	8/12/2011 02:40 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-75
Lab Order: 119318 **Collection Date:** 8/5/2011 2:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-003G

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	LUFT			EPA 8015B(M)		
RunID: GC16_110811A	QC Batch: 74856			PrepDate: 8/11/2011		Analyst: CBR
DRO	ND	10		mg/Kg	1	8/11/2011 12:29 PM
ORO	ND	10		mg/Kg	1	8/11/2011 12:29 PM
Surr: p-Terphenyl	85.3	63-152		%REC	1	8/11/2011 12:29 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-GW
Lab Order: 119318 **Collection Date:** 8/5/2011 11:20:00 AM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER
Lab ID: 119318-004A

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

EPA 8260B

RunID:	MS2_110817A	QC Batch:	Q11VW151	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
2-Chlorotoluene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
4-Chlorotoluene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Benzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Bromobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Bromodichloromethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Bromoform	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Bromomethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Carbon tetrachloride	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Chlorobenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Chloroethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Chloroform	ND	0.50	µg/L	1	8/17/2011 05:16 PM
Chloromethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	8/17/2011 05:16 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-GW
Lab Order: 119318 **Collection Date:** 8/5/2011 11:20:00 AM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** GROUNDWATER
Lab ID: 119318-004A

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

EPA 8260B

RunID:	MS2_110817A	QC Batch:	Q11VW151	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Di-isopropyl ether	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Dibromochloromethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Dibromomethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Ethyl tert-butyl ether	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Ethylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Isopropylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
m,p-Xylene	ND	1.0	µg/L	1	8/17/2011 05:16 PM	
Methylene chloride	ND	1.0	µg/L	1	8/17/2011 05:16 PM	
MTBE	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
n-Butylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
n-Propylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Naphthalene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
o-Xylene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Styrene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Tert-amyl methyl ether	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Tert-Butanol	ND	10	µg/L	1	8/17/2011 05:16 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Tetrachloroethene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Toluene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Trichloroethene	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Vinyl chloride	ND	0.50	µg/L	1	8/17/2011 05:16 PM	
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	8/17/2011 05:16 PM	
Surr: 4-Bromofluorobenzene	96.2	70-130	%REC	1	8/17/2011 05:16 PM	
Surr: Dibromofluoromethane	99.5	70-130	%REC	1	8/17/2011 05:16 PM	
Surr: Toluene-d8	95.7	70-130	%REC	1	8/17/2011 05:16 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: 18-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-125-GW
Lab Order:	119318	Collection Date:	8/5/2011 11:20:00 AM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	GROUNDWATER
Lab ID:	119318-004B		

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

EPA 8015B(M)

RunID: GC19_110810A	QC Batch: M11VW156	PrepDate:	Analyst: BB		
GRO	ND	0.20	mg/L	1	8/10/2011 04:28 PM
Surr: Bromofluorobenzene (FID)	89.7	70-130	%REC	1	8/10/2011 04:28 PM

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



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ANALYTICAL RESULTS

Print Date: 18-Aug-11

CLIENT:	Mactec	Client Sample ID:	E-125-GW
Lab Order:	119318	Collection Date:	8/5/2011 11:20:00 AM
Project:	METRO WESTSIDE EXTENSION, 4953-10	Matrix:	GROUNDWATER
Lab ID:	119318-004C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	EPA 3510C			EPA 8015B(M)		
RunID: GC16_110811B	QC Batch: 74865			PrepDate: 8/11/2011		Analyst: CBR
DRO	ND	0.20		mg/L	1	8/11/2011 03:53 PM
ORO	ND	0.20		mg/L	1	8/11/2011 03:53 PM
Surr: p-Terphenyl	65.0	36-126		%REC	1	8/11/2011 03:53 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: 18-Aug-11

CLIENT: Mactec **Client Sample ID:** E-125-65
Lab Order: 119318 **Collection Date:** 8/5/2011 1:05:00 PM
Project: METRO WESTSIDE EXTENSION, 4953-10 **Matrix:** SOIL
Lab ID: 119318-009A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			EPA 6010B		
RunID: ICP8_110815A	QC Batch: 74893				PrepDate: 8/15/2011	Analyst: IL
Antimony	ND	2.0		mg/Kg	1	8/15/2011 12:06 PM
Arsenic	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Barium	110	1.0		mg/Kg	1	8/15/2011 12:06 PM
Beryllium	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Cadmium	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Chromium	20	1.0		mg/Kg	1	8/15/2011 12:06 PM
Cobalt	7.8	1.0		mg/Kg	1	8/15/2011 12:06 PM
Copper	10	2.0		mg/Kg	1	8/15/2011 12:06 PM
Lead	2.6	1.0		mg/Kg	1	8/15/2011 12:06 PM
Molybdenum	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Nickel	19	1.0		mg/Kg	1	8/15/2011 12:06 PM
Selenium	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Silver	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Thallium	ND	1.0		mg/Kg	1	8/15/2011 12:06 PM
Vanadium	20	1.0		mg/Kg	1	8/15/2011 12:06 PM
Zinc	30	1.0		mg/Kg	1	8/15/2011 12:06 PM

MERCURY BY COLD VAPOR TECHNIQUE

	EPA 7471A					
RunID: AA1_110815A	QC Batch: 74892				PrepDate: 8/15/2011	Analyst: VV
Mercury	ND	0.10		mg/Kg	1	8/15/2011 01:12 PM

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



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CLIENT: Mactec
 Work Order: 119318
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: MB-74893	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135803						
Client ID: PBS	Batch ID: 74893	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/15/2011	SeqNo: 2224613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	0.167	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	0.163	1.0									

Sample ID: LCS-74893	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135803						
Client ID: LCSS	Batch ID: 74893	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/15/2011	SeqNo: 2224614						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	46.633	2.0	50.00	0.1665	92.9	80	120				
Arsenic	46.487	1.0	50.00	0	93.0	80	120				
Barium	49.146	1.0	50.00	0	98.3	80	120				
Beryllium	48.610	1.0	50.00	0	97.2	80	120				
Cadmium	47.672	1.0	50.00	0	95.3	80	120				
Chromium	45.539	1.0	50.00	0	91.1	80	120				
Cobalt	48.931	1.0	50.00	0	97.9	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: LCS-74893	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135803						
Client ID: LCSS	Batch ID: 74893	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/15/2011	SeqNo: 2224614						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	49.409	2.0	50.00	0	98.8	80	120				
Lead	48.954	1.0	50.00	0	97.9	80	120				
Molybdenum	51.180	1.0	50.00	0	102	80	120				
Nickel	47.880	1.0	50.00	0	95.8	80	120				
Selenium	44.213	1.0	50.00	0	88.4	80	120				
Silver	47.418	1.0	50.00	0	94.8	80	120				
Thallium	46.832	1.0	50.00	0	93.7	80	120				
Vanadium	48.569	1.0	50.00	0	97.1	80	120				
Zinc	48.438	1.0	50.00	0.1630	96.6	80	120				

Sample ID: 119310-001A-MS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135803						
Client ID: ZZZZZZ	Batch ID: 74893	TestNo: EPA 6010B EPA 3050B		Analysis Date: 8/15/2011	SeqNo: 2224616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	90.455	2.0	125.0	0	72.4	32	105				
Arsenic	103.613	1.0	125.0	0	82.9	49	106				
Barium	148.522	1.0	125.0	37.36	88.9	31	133				
Beryllium	107.810	1.0	125.0	0	86.2	56	106				
Cadmium	99.747	1.0	125.0	0.3429	79.5	51	103				
Chromium	107.423	1.0	125.0	6.496	80.7	45	114				
Cobalt	113.007	1.0	125.0	6.949	84.8	52	106				
Copper	123.604	2.0	125.0	8.066	92.4	54	125				
Lead	107.736	1.0	125.0	3.886	83.1	34	126				
Molybdenum	107.583	1.0	125.0	0	86.1	54	106				
Nickel	119.272	1.0	125.0	19.62	79.7	45	111				
Selenium	100.660	1.0	125.0	0	80.5	47	104				
Silver	108.904	1.0	125.0	0	87.1	56	112				
Thallium	94.763	1.0	125.0	0	75.8	46	101				
Vanadium	134.704	1.0	125.0	25.39	87.4	54	114				
Zinc	128.445	1.0	125.0	22.99	84.4	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: 119310-001A-MSD		SampType: MSD		TestCode: 6010_S		Units: mg/Kg		Prep Date: 8/15/2011		RunNo: 135803	
Client ID: ZZZZZZ		Batch ID: 74893		TestNo: EPA 6010B EPA 3050B				Analysis Date: 8/15/2011		SeqNo: 2224617	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	85.723	2.0	125.0	0	68.6	32	105	90.45	5.37	20	
Arsenic	99.269	1.0	125.0	0	79.4	49	106	103.6	4.28	20	
Barium	148.395	1.0	125.0	37.36	88.8	31	133	148.5	0.0855	20	
Beryllium	102.498	1.0	125.0	0	82.0	56	106	107.8	5.05	20	
Cadmium	95.478	1.0	125.0	0.3429	76.1	51	103	99.75	4.37	20	
Chromium	104.303	1.0	125.0	6.496	78.2	45	114	107.4	2.95	20	
Cobalt	110.359	1.0	125.0	6.949	82.7	52	106	113.0	2.37	20	
Copper	121.402	2.0	125.0	8.066	90.7	54	125	123.6	1.80	20	
Lead	102.523	1.0	125.0	3.886	78.9	34	126	107.7	4.96	20	
Molybdenum	104.298	1.0	125.0	0	83.4	54	106	107.6	3.10	20	
Nickel	117.674	1.0	125.0	19.62	78.4	45	111	119.3	1.35	20	
Selenium	96.694	1.0	125.0	0	77.4	47	104	100.7	4.02	20	
Silver	105.256	1.0	125.0	0	84.2	56	112	108.9	3.41	20	
Thallium	90.143	1.0	125.0	0	72.1	46	101	94.76	5.00	20	
Vanadium	132.792	1.0	125.0	25.39	85.9	54	114	134.7	1.43	20	
Zinc	124.762	1.0	125.0	22.99	81.4	28	125	128.4	2.91	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-74892	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135807						
Client ID: PBS	Batch ID: 74892	TestNo: EPA 7471A		Analysis Date: 8/15/2011	SeqNo: 2224679						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.10

Sample ID: LCS-74892	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135807						
Client ID: LCSS	Batch ID: 74892	TestNo: EPA 7471A		Analysis Date: 8/15/2011	SeqNo: 2224680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.799 0.10 0.8300 0 96.2 80 120

Sample ID: 119310-001A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135807						
Client ID: ZZZZZZ	Batch ID: 74892	TestNo: EPA 7471A		Analysis Date: 8/15/2011	SeqNo: 2224681						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.284 0.10 0.8300 1.000 34.1 70 130 S

Sample ID: 119310-001A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/15/2011	RunNo: 135807						
Client ID: ZZZZZZ	Batch ID: 74892	TestNo: EPA 7471A		Analysis Date: 8/15/2011	SeqNo: 2224682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.273 0.10 0.8300 1.000 32.9 70 130 1.284 0.825 20 S

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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID: MB-74856	SampType: MBLK	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/11/2011	RunNo: 135751						
Client ID: PBS	Batch ID: 74856	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/11/2011	SeqNo: 2223556						
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	82.300		80.00		103	63	152				

Sample ID: LCS-74856	SampType: LCS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/11/2011	RunNo: 135751						
Client ID: LCSS	Batch ID: 74856	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/11/2011	SeqNo: 2223557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	919.260	10	1000	0	91.9	76	139				
Surr: p-Terphenyl	86.490		80.00		108	63	152				

Sample ID: 119344-031AMS	SampType: MS	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/11/2011	RunNo: 135751						
Client ID: ZZZZZ	Batch ID: 74856	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/11/2011	SeqNo: 2223568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	870.740	10	1000	10.16	86.1	60	158				
Surr: p-Terphenyl	73.440		80.00		91.8	63	152				

Sample ID: 119344-031AMSD	SampType: MSD	TestCode: 8015_S_DM H	Units: mg/Kg	Prep Date: 8/11/2011	RunNo: 135751						
Client ID: ZZZZZ	Batch ID: 74856	TestNo: EPA 8015B(M LUFT		Analysis Date: 8/11/2011	SeqNo: 2223569						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	866.460	10	1000	10.16	85.6	60	158	870.7	0.493	20	
Surr: p-Terphenyl	72.940		80.00		91.2	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: E110812LC1	SampType: LCS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135794						
Client ID: LCSS	Batch ID: E11VS297	TestNo: EPA 8015B(M)	Analysis Date: 8/12/2011	SeqNo: 2224463							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.271	1.0	5.000	0	105	70	130				
Surr: Bromofluorobenzene (FID)	108.484		100.0		108	51	161				

Sample ID: E110812MB1MS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135794						
Client ID: ZZZZZ	Batch ID: E11VS297	TestNo: EPA 8015B(M)	Analysis Date: 8/12/2011	SeqNo: 2224464							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.168	1.0	5.000	0	103	41	146				
Surr: Bromofluorobenzene (FID)	128.051		100.0		128	51	161				

Sample ID: E110812MB1MSD	SampType: MSD	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135794						
Client ID: ZZZZZ	Batch ID: E11VS297	TestNo: EPA 8015B(M)	Analysis Date: 8/12/2011	SeqNo: 2224465							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.195	1.0	5.000	0	104	41	146	5.168	0.521	20	
Surr: Bromofluorobenzene (FID)	126.937		100.0		127	51	161		0	0	

Sample ID: E110812MB1	SampType: MBLK	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135794						
Client ID: PBS	Batch ID: E11VS297	TestNo: EPA 8015B(M)	Analysis Date: 8/12/2011	SeqNo: 2224466							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	86.316		100.0		86.3	51	161				

Sample ID: 119359-007AMS	SampType: MS	TestCode: 8015_S_G 50	Units: mg/Kg	Prep Date:	RunNo: 135794						
Client ID: ZZZZZ	Batch ID: E11VS297	TestNo: EPA 8015B(M)	Analysis Date: 8/12/2011	SeqNo: 2224471							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.786	1.0	5.000	0	95.7	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_G 5035P

Sample ID: 119359-007AMS		SampType: MS		TestCode: 8015_S_G 50		Units: mg/Kg		Prep Date:		RunNo: 135794	
Client ID: ZZZZZZ		Batch ID: E11VS297		TestNo: EPA 8015B(M)		Analysis Date: 8/12/2011				SeqNo: 2224471	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	118.193		100.0		118	51	161				

Sample ID: 119359-007AMSD		SampType: MSD		TestCode: 8015_S_G 50		Units: mg/Kg		Prep Date:		RunNo: 135794	
Client ID: ZZZZZZ		Batch ID: E11VS297		TestNo: EPA 8015B(M)		Analysis Date: 8/12/2011				SeqNo: 2224472	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.933	1.0	5.000	0	98.7	41	146	4.786	3.03	20	
Surr: Bromofluorobenzene (FID)	113.906		100.0		114	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM

Sample ID: MB-74865	SampType: MBLK	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/11/2011	RunNo: 135772						
Client ID: PBW	Batch ID: 74865	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/11/2011	SeqNo: 2223843						
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	0.044		0.08000		54.5	36	126				

Sample ID: LCS-74865	SampType: LCS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/11/2011	RunNo: 135772						
Client ID: LCSW	Batch ID: 74865	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/11/2011	SeqNo: 2223844						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.597	0.20	1.000	0	59.7	52	128				
Surr: p-Terphenyl	0.051		0.08000		64.4	36	126				

Sample ID: MB-74865MS	SampType: MS	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/11/2011	RunNo: 135772						
Client ID: ZZZZZ	Batch ID: 74865	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/11/2011	SeqNo: 2223845						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.599	0.20	1.000	0	59.9	52	128				
Surr: p-Terphenyl	0.044		0.08000		55.3	36	126				

Sample ID: MB-74865MSD	SampType: MSD	TestCode: 8015_W_DM	Units: mg/L	Prep Date: 8/11/2011	RunNo: 135772						
Client ID: ZZZZZ	Batch ID: 74865	TestNo: EPA 8015B(M EPA 3510C		Analysis Date: 8/11/2011	SeqNo: 2223846						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

DRO	0.571	0.20	1.000	0	57.1	52	128	0.5990	4.72	20	
Surr: p-Terphenyl	0.050		0.08000		62.2	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_G PRES

Sample ID: M110810LCS2	SampType: LCS	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135735						
Client ID: LCSW	Batch ID: M11VW156	TestNo: EPA 8015B(M)	Analysis Date: 8/10/2011	SeqNo: 2223175							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	1.099	0.20	1.000	0	110	70	130				
Surr: Bromofluorobenzene (FID)	89.753		100.0		89.8	70	130				

Sample ID: M110810MB1MS	SampType: MS	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135735						
Client ID: ZZZZZZ	Batch ID: M11VW156	TestNo: EPA 8015B(M)	Analysis Date: 8/10/2011	SeqNo: 2223177							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	1.042	0.20	1.000	0	104	70	130				
Surr: Bromofluorobenzene (FID)	89.977		100.0		90.0	70	130				

Sample ID: M110810MB1MSD	SampType: MSD	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135735						
Client ID: ZZZZZZ	Batch ID: M11VW156	TestNo: EPA 8015B(M)	Analysis Date: 8/10/2011	SeqNo: 2223178							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	1.131	0.20	1.000	0	113	70	130	1.042	8.19	20	
Surr: Bromofluorobenzene (FID)	91.935		100.0		91.9	70	130		0	0	

Sample ID: M110810MB1	SampType: MBLK	TestCode: 8015_W_G P	Units: mg/L	Prep Date:	RunNo: 135735						
Client ID: PBW	Batch ID: M11VW156	TestNo: EPA 8015B(M)	Analysis Date: 8/10/2011	SeqNo: 2223179							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

GRO	ND	0.20									
Surr: Bromofluorobenzene (FID)	88.859		100.0		88.9	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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110812LCS1		SampType: LCS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135785		
Client ID: LCSS		Batch ID: T11VS145		TestNo: EPA 8260B				Analysis Date: 8/12/2011		SeqNo: 2224318		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	41.790	5.0	50.00	0	83.6	70	130					
Benzene	90.750	5.0	100.0	0	90.8	70	130					
Chlorobenzene	52.280	5.0	50.00	0	105	70	130					
MTBE	44.870	5.0	50.00	0	89.7	70	130					
Toluene	97.170	5.0	100.0	0	97.2	70	130					
Trichloroethene	49.100	5.0	50.00	0	98.2	70	130					
Surr: 1,2-Dichloroethane-d4	40.270		50.00		80.5	65	141					
Surr: 4-Bromofluorobenzene	46.990		50.00		94.0	57	134					
Surr: Dibromofluoromethane	44.570		50.00		89.1	70	128					
Surr: Toluene-d8	47.780		50.00		95.6	72	123					

Sample ID: T110812MB1MS		SampType: MS		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135785		
Client ID: ZZZZZ		Batch ID: T11VS145		TestNo: EPA 8260B				Analysis Date: 8/12/2011		SeqNo: 2224319		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	43.860	5.0	50.00	0	87.7	70	130					
Benzene	94.190	5.0	100.0	0	94.2	70	130					
Chlorobenzene	51.430	5.0	50.00	0	103	70	130					
MTBE	47.650	5.0	50.00	0	95.3	70	130					
Toluene	99.630	5.0	100.0	0	99.6	70	130					
Trichloroethene	51.130	5.0	50.00	0	102	70	130					
Surr: 1,2-Dichloroethane-d4	41.330		50.00		82.7	65	141					
Surr: 4-Bromofluorobenzene	42.580		50.00		85.2	57	134					
Surr: Dibromofluoromethane	47.110		50.00		94.2	70	128					
Surr: Toluene-d8	47.320		50.00		94.6	72	123					

Sample ID: T110812MB1MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135785		
Client ID: ZZZZZ		Batch ID: T11VS145		TestNo: EPA 8260B				Analysis Date: 8/12/2011		SeqNo: 2224320		
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: 119318
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110812MB1MSD		SampType: MSD		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135785	
Client ID: ZZZZZZ		Batch ID: T11VS145		TestNo: EPA 8260B		Analysis Date: 8/12/2011				SeqNo: 2224320	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.150	5.0	50.00	0	86.3	70	130	43.86	1.63	20	
Benzene	91.930	5.0	100.0	0	91.9	70	130	94.19	2.43	20	
Chlorobenzene	51.130	5.0	50.00	0	102	70	130	51.43	0.585	20	
MTBE	46.520	5.0	50.00	0	93.0	70	130	47.65	2.40	20	
Toluene	98.390	5.0	100.0	0	98.4	70	130	99.63	1.25	20	
Trichloroethene	48.160	5.0	50.00	0	96.3	70	130	51.13	5.98	20	
Surr: 1,2-Dichloroethane-d4	41.580		50.00		83.2	65	141		0	0	
Surr: 4-Bromofluorobenzene	42.460		50.00		84.9	57	134		0	0	
Surr: Dibromofluoromethane	45.480		50.00		91.0	70	128		0	0	
Surr: Toluene-d8	46.310		50.00		92.6	72	123		0	0	

Sample ID: T110812MB1		SampType: MBLK		TestCode: 8260_S_5035		Units: µg/Kg		Prep Date:		RunNo: 135785	
Client ID: PBS		Batch ID: T11VS145		TestNo: EPA 8260B		Analysis Date: 8/12/2011				SeqNo: 2224321	
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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|---|--|--|
| 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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110812MB1	SampType: MBLK	TestCode: 8260_S_5035	Units: µg/Kg	Prep Date:	RunNo: 135785						
Client ID: PBS	Batch ID: T11VS145	TestNo: EPA 8260B		Analysis Date: 8/12/2011	SeqNo: 2224321						
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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| 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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035

Sample ID: T110812MB1		SampType: MBLK		TestCode: 8260_S_5035 Units: µg/Kg		Prep Date:		RunNo: 135785			
Client ID: PBS		Batch ID: T11VS145		TestNo: EPA 8260B		Analysis Date: 8/12/2011		SeqNo: 2224321			
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	41.720		50.00		83.4	65	141				
Surr: 4-Bromofluorobenzene	42.040		50.00		84.1	57	134				
Surr: Dibromofluoromethane	44.870		50.00		89.7	70	128				
Surr: Toluene-d8	45.900		50.00		91.8	72	123				

Qualifiers:

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|---|--|--|
| 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: 119318
 Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q110817LCS1		SampType: LCS		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135885			
Client ID: LCSW		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011		SeqNo: 2226947			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.710	0.50	20.00	0	83.6	70	130				
Benzene	39.230	0.50	40.00	0	98.1	70	130				
Chlorobenzene	20.360	0.50	20.00	0	102	70	130				
MTBE	21.830	0.50	20.00	0	109	70	130				
Toluene	41.350	0.50	40.00	0	103	70	130				
Trichloroethene	20.290	0.50	20.00	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	22.080		25.00		88.3	70	130				
Surr: 4-Bromofluorobenzene	24.160		25.00		96.6	70	130				
Surr: Dibromofluoromethane	22.210		25.00		88.8	70	130				
Surr: Toluene-d8	23.950		25.00		95.8	70	130				

Sample ID: Q110817MB3MS		SampType: MS		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135885			
Client ID: ZZZZZ		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011		SeqNo: 2226948			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.010	0.50	20.00	0	85.0	70	130				
Benzene	39.840	0.50	40.00	0	99.6	70	130				
Chlorobenzene	20.970	0.50	20.00	0	105	70	130				
MTBE	22.020	0.50	20.00	0	110	70	130				
Toluene	41.590	0.50	40.00	0	104	70	130				
Trichloroethene	20.250	0.50	20.00	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	22.160		25.00		88.6	70	130				
Surr: 4-Bromofluorobenzene	23.910		25.00		95.6	70	130				
Surr: Dibromofluoromethane	22.100		25.00		88.4	70	130				
Surr: Toluene-d8	23.750		25.00		95.0	70	130				

Sample ID: Q110817MB3MSD		SampType: MSD		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135885			
Client ID: ZZZZZ		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011		SeqNo: 2226949			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

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|---|--|--|
| 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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q110817MB3MSD		SampType: MSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135885	
Client ID: ZZZZZ		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011				SeqNo: 2226949	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.560	0.50	20.00	0	87.8	70	130	17.01	3.18	20	
Benzene	40.390	0.50	40.00	0	101	70	130	39.84	1.37	20	
Chlorobenzene	20.840	0.50	20.00	0	104	70	130	20.97	0.622	20	
MTBE	21.980	0.50	20.00	0	110	70	130	22.02	0.182	20	
Toluene	41.900	0.50	40.00	0	105	70	130	41.59	0.743	20	
Trichloroethene	20.670	0.50	20.00	0	103	70	130	20.25	2.05	20	
Surr: 1,2-Dichloroethane-d4	21.750		25.00		87.0	70	130		0	0	
Surr: 4-Bromofluorobenzene	23.730		25.00		94.9	70	130		0	0	
Surr: Dibromofluoromethane	21.990		25.00		88.0	70	130		0	0	
Surr: Toluene-d8	23.780		25.00		95.1	70	130		0	0	

Sample ID: Q110817MB3		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 135885	
Client ID: PBW		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011				SeqNo: 2226950	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

Qualifiers:

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|---|--|--|
| 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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q110817MB3		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135885			
Client ID: PBW		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011		SeqNo: 2226950			
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	0.210	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Di-isopropyl ether	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethyl tert-butyl ether	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									

Qualifiers:

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|---|--|--|
| 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: 119318
Project: METRO WESTSIDE EXTENSION, 4953-10-1

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: Q110817MB3		SampType: MBLK		TestCode: 8260_WP_LL Units: µg/L		Prep Date:		RunNo: 135885			
Client ID: PBW		Batch ID: Q11VW151		TestNo: EPA 8260B		Analysis Date: 8/17/2011		SeqNo: 2226950			
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	24.600		25.00		98.4	70	130				
Surr: 4-Bromofluorobenzene	24.680		25.00		98.7	70	130				
Surr: Dibromofluoromethane	24.280		25.00		97.1	70	130				
Surr: Toluene-d8	24.330		25.00		97.3	70	130				

Qualifiers:

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

